



Carlos A. Gimenez, Mayor

Department of Regulatory and Economic Resources

Environmental Resources Management

701 NW 1st Court, 4th Floor

Miami, Florida 33136-3912

T 305-372-6700 F 305-372-6982

miamidade.gov

July 15, 2019

CERTIFIED MAIL NO. 7018 1130 0001 5261 1548  
RETURN RECEIPT REQUESTED

Emilio T. Gonzalez, City Manager  
City of Miami  
444 Southwest 2<sup>nd</sup> Avenue  
Miami, Florida 331300

Re: Melreese Golf Course (AW-284/File-9442) located at, near, or in the vicinity of 1802 NW 37 Avenue, Miami, Miami-Dade County, Florida.

Dear Mr. Gonzalez:

The Department of Regulatory and Economic Resources-Division of Environmental Resources Management (DERM) has conducted additional soil sampling at the subject site. The sampling was conducted on June 13, 2019 with results provided by July 2, 2019. The laboratory data is attached.

As observed during the soil sampling event, DERM identified three soil sample locations (SB-3, SB-5, and SB-10) with surficial debris in the upper soil interval that require immediate attention as they pose a physical hazard. In addition, one soil sample location (SB-1) exhibited total lead concentrations that also requires further action. At each of the SB-3, SB-5, and SB-10 locations, the horizontal extent of the surficial debris shall be defined from the top 1' interval. For the SB-1 location, the horizontal extent of the total lead impacts shall be defined in the 0-6" and 6"-2' intervals. Once defined, the physical hazards and total lead impacts shall be addressed through soil removal and replacement with clean fill or through an approved engineering control. The locations of the specific soil borings referenced above are provided on the attached map. A report documenting that the referenced areas have been addressed as described shall be provided to DERM within thirty (30) days upon receipt of this letter.

DERM has the option to split any samples deemed necessary with the consultant or laboratory at the subject site. The consultant collecting the samples shall perform field sampling work in accordance with the Standard Operating Procedures provided in Chapter 62-160, Florida Administrative Code (FAC), as amended. The laboratory analyzing the samples shall perform laboratory analyses pursuant to the National Environmental Laboratory Accreditation Program (NELAP) certification requirements. If the data submitted exhibits a substantial variance from DERM split sample analysis, a complete resampling using two independent certified laboratories will be required.

DERM shall be notified in writing a minimum of three (3) working days prior to the implementation of any sampling or field activities. Email notifications shall be directed to DERMPCD@miamidade.gov. Please include the DERM file number on all correspondence.

Failure to adhere to the items and timeframes stipulated above may result in enforcement action for this site.

*Delivering Excellence Every Day*

Mr. Gonzalez

AW-284

July 15, 2019

Page 2 of 2

Any person aggrieved by any action or decision of the DERM Director may appeal said action or decision to the Environmental Quality Control Board (EQCB) by filing a written notice of appeal along with submittal of the applicable fee, to the Code Coordination and Public Hearings Section of DERM within fifteen (15) days of the date of the action or decision by DERM.

If you have any questions concerning the above, please contact Thomas Kux, P.G., (kuxt@miamidade.gov) of DERM at (305) 372-6700.

Sincerely,



Wilbur Mayorga, P.E., Chief  
Environmental Monitoring & Restoration Division

TK  
Attach

Ec: Lee Hefty, DERM  
John Andersen, DERM  
Samir Elmir, FLDOH

7/2019



### Melreese Golf Course

AW-284 File# 9442

SB-1	80°15'48.982"W	25°47'23.725"N
SB-3	80°15'27.598"W	25°47'27.807"N
SB-5	80°15'45.041"W	25°47'21.741"N
SB-10	80°41.012"W	25°47'30.036"N

## **Melreese Golf Course**

### **AW-284 File# 9442**

SB-1	80°15'48.982"W	25°47'23.725"N
SB-2	80°15'34.483"W	25°47'29.326"N
SB-3	80°15'27.598"W	25°47'27.807"N
SB-4	80°15'26.163"W	25°47'29.938"N
SB-5	80°15'45.041"W	25°47'21.741"N
SB-6	80°15'44.119"W	25°47'30.401"N
SB-7	80°15'37.622"W	25°47'16.891"N
SB-8	80°15'30.871"W	25°47'21.014"N
SB-9	80°15'40.029"W	25°47'37.003"N
SB-10	80°15'41.012"W	25°47'30.036"N

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## MIAMI-DADE COUNTY, FLORIDA

MIAMI-DADE  
COUNTYEPA # FL00025  
FL CERT # E46126  
RUSHLABORATORY ANALYSIS RECORD  
ENFORCEMENT

Department of Regulatory and Economic Resources

Environmental Resources Management

Office of Laboratory Services  
MIAMI, FLORIDA 33130-1510  
(305)-375-1851

Site : Melreese Golf Course

Address: 1802 NW 37<sup>th</sup> Avenue

Sample #: 323468

Sampler/Section: Vianey Alvarado / Richard Hilaire / EMES

Date: 6/12/2019 Time: 10:53

Deliverer/Section: Vianey Alvarado / Richard Hilaire / EMES

Collection Point:

Return Analysis to/Section: Tom Kux /Raymond Gonzalez / EMES

MGC\_SB-1

C.C.#: 992511 Permit: AW-284 Phone: 305-372-6700

Observation/Known Hazards:

13 JUN '19 12:34

AD13810

Clock-In Date/Inspector

Sign By Inspector

\*Sign By Lab Custodian

5.3

\*Temp.(° C)  
upon Rec.

Return For TCLP / SPLP?

Clock-In Date/Inspector

Date Requested \*Laboratory ID # / Fridge # \*Laboratory ID # / Fridge #

14 JUN '19 8:11

\*Take-Out Date/ RER Lab

^Regulatory Limits: SDWA \_ NPDES \_ RCRA \_ Chap. 24 \_ Other \_

Matrix: H2O \_ Soil/Sludge  Product \_ Layer \_ Sewage \_ Other \_Preservation: None  Acid \_ Base \_ Thermal: Iced  No Iced \_Sample Bottle  
Prepared Lot #: 050318GSUPicked-Up Date  
By Inspector: 6/12/2019Split Sample? Yes  No  Consultant/Lab:

\*Returned-Date/ RER Lab

\*Take-Out Date/ RER Lab

\*Returned-Date/ RER Lab

Test(s) Run/Method # Test(s) Run/Method #

As, Ba, Pb

Temp° Iced? \_\_\_\_\_

AD13796 5.3

\*Take-Out Date/ RER Lab

For Disposal Date:  
See Metal Disposal Log

Relinquished To: \*\*Contract Lab \_\_\_\_\_

\*Sample Disposal Date

Delivered By / Date: \_\_\_\_\_

LAB RESULTS ATTACHED

\*Extracted By / Date

Received By / Date: \_\_\_\_\_

17 JUN '19 11:14

Extracted By / Date: \_\_\_\_\_

\*Analyzed By / Date

Analyzed By / Date: \_\_\_\_\_

Returned By / Date: \_\_\_\_\_

Comments light gray fine soil with shell fragments  
N 25° 47' 24", W 80° 13' 49"

\* By RER Lab \*\* By Contract Lab ^ Please specify the regulatory limit range

Revised 02/03/2014



EPA # FL0002  
FL CERT E46126

# Office of Laboratory Services

## Sample Analysis Record

R E R

211 W. Flagler St.  
Miami, FL 33130  
(305) 375-1851

### Metals

**Site Description : MELREESE GOLF COURSE**

Blue Card No : 323468 Collected : 06/13/19 10:53  
LIMS ID : AD13810 Received : 06/13/19 12:34  
Sampled By : HILAR-RI Matrix : Solid

Metals	Conc.	MDL/PQL	Unit	DF	Extracted	Digested	Analyzed	By
% Moisture	19.38	n/a	%					
Arsenic by 6010-3050B	33.1	1.0 / 1.5 ( RL/PQL: 1.2 / 1.8 )	mg/Kg	n/a	06/14/19 9:45	06/17/19 10:25	MG	
Barium by 6010-3050B	7.4	0.3 / 1.2 ( RL/PQL: 0.4 / 1.5 )	mg/Kg	n/a	06/14/19 9:45	06/17/19 10:25	MG	
Lead by 6010-3050B	854	0.3 / 1.2 ( RL/PQL: 0.4 / 1.5 )	mg/Kg	2	n/a	06/14/19 9:45	06/17/19 10:57	MG
								Comment : C12

### Analysis Qualifiers / Comments Description

C12 Sample was diluted due to the presence of high levels of target analytes.

U = Below MDL MDL = Method Detection Limit I = Between MDL and PQL DF = Dilution Factor All analyses are in compliance with NELAC standards.

Date of Issue

6/17/2019

Page 1 of 1 Note : Multiply MDL(or RL) by Dilution Factor ( 1.0, unless noted otherwise. )

All results being reported under this report apply to the samples analyzed. n/a=Not Applicable

Results are reported in dry wt. unless otherwise noted. RL= Reporting Limits

If you have any questions please contact the QA Officer at 305-375-1851.

Yin Chen / QA Officer

GSU

RUSH

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## MIAMI-DADE COUNTY, FLORIDA

MIAMI-DADE  
COUNTYEPA # FL00025  
FL CERT # E46126

RUSH

## Department of Regulatory and Economic Resources

Environmental Resources Management

Office of Laboratory Services  
MIAMI, FLORIDA 33130-1510  
(305)-375-1851LABORATORY ANALYSIS RECORD  
ENFORCEMENT

Site : Melreese Golf Course

Address: 1802 NW 37<sup>th</sup> Avenue

Sampler/Section: Vianey Alvarado / Richard Hilaire / EMES

Deliverer/Section: Vianey Alvarado / Richard Hilaire / EMES

Return Analysis to/Section: Tom Kux /Raymond Gonzalez / EMES

C.C.#: 992511 Permit : AW-284 Phone : 305-372-6700

323447

Sample #: 13  
Date : 6/12/2019 Time : 10:05

Collection Point :

MGC\_SB-2

Observation/Known Hazards:

13 JUN '19 12:34

Clock-In Date/Inspector

Sign By Inspector

\*Sign By Lab Custodian

AD13802

5.3

\*Temp.(° C)  
upon Rec.

Return For TCLP / SPLP?

Clock-In Date/Inspector

14 JUN '19 8:10

\*Take-Out Date/RER Lab

\*Returned-Date/RER Lab

\*Take-Out Date/RER Lab

\*Returned-Date/RER Lab

For Disposal Date:  
See Metal Disposal Log

\*Sample Disposal Date

\*Extracted By / Date

17 JUN '19 11:14

\*Analyzed By / Date

Date Requested \*Laboratory ID # / Fridge # \*Laboratory ID # / Fridge #

^Regulatory Limits: SDWA NPDES RCRA Chap. 24 Other

Matrix: H2O Soil/Sludge Product Layer Sewage Other

Preservation: None Acid Base Thermal: Iced No Iced

Sample Bottle Prepared Lot #: 050318GSU

Picked-Up Date  
By Inspector: 6/12/2019

Split Sample? Yes No Consultant/Lab:

Test(s) Run/Method # Test(s) Run/Method #

As, Ba, Pb

Temp° Iced?

AD13796

Rep. Sample

5.3

(Y)

N

Relinquished To: \*\*Contract Lab

Delivered By / Date:

Received By / Date:

Extracted By / Date:

Analyzed By / Date:

Returned By / Date:

LAB RESULTS ATTACHED

Comments Fine light brown grain sand  
NZ5° 47' 29", W 80° 15' 35"

\* By RER Lab \*\* By Contract Lab ^ Please specify the regulatory limit range

Revised 02/03/2014



EPA # FL0002

FL CERT E46126

# Office of Laboratory Services

## Sample Analysis Record

R E R

### Metals

211 W. Flagler St.  
Miami, FL 33130  
(305) 375-1851

**Site Description : MELREESE GOLF COURSE**

Blue Card No : 323447      Collected : 06/13/19 10:05  
 LIMS ID : AD13802      Received : 06/13/19 12:34  
 Sampled By : HILAR-RI      Matrix : Solid

Metals	Conc.	MDL/PQL	Unit	DF	Extracted	Digested	Analyzed	By
% Moisture	13.26	n/a	%					
Arsenic by 6010-3050B	16.0	1.0 / 1.5 ( RL/PQL: 1.2 / 1.7 )	mg/Kg	n/a	06/14/19 9:45	06/17/19 10:18	MG	
Barium by 6010-3050B	5.1	0.3 / 1.2 ( RL/PQL: 0.3 / 1.4 )	mg/Kg	n/a	06/14/19 9:45	06/17/19 10:18	MG	
Lead by 6010-3050B	3.6	0.3 / 1.2 ( RL/PQL: 0.3 / 1.4 )	mg/Kg	n/a	06/14/19 9:45	06/17/19 10:18	MG	

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#### Analysis Qualifiers / Comments Description

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- No Comment

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U = Below MDL MDL = Method Detection Limit I = Between MDL and PQL DF = Dilution Factor All analyses are in compliance with NELAC standards.

Date of Issue

6/17/2019

Page 1 of 1 Note : Multiply MDL(or RL) by Dilution Factor ( 1.0, unless noted otherwise. )

All results being reported under this report apply to the samples analyzed. n/a=Not Applicable

Results are reported in dry wt. unless otherwise noted. RL= Reporting Limits

If you have any questions please contact the QA Officer at 305-375-1851.

Yin Chen / QA Officer

GSA

RUSH

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## MIAMI-DADE COUNTY, FLORIDA

MIAMI-DADE  
COUNTYEPA # FL00025  
FL CERT # E46126

RUSH

Department of Regulatory and Economic Resources

Environmental Resources Management

Office of Laboratory Services  
MIAMI, FLORIDA 33130-1510  
(305)-375-1851LABORATORY ANALYSIS RECORD  
ENFORCEMENT

Site :

Melreese Golf Course

Address:

1802 NW 37<sup>th</sup> Avenue

Sampler/Section:

Vianey Alvarado / Richard Hilaire / EMES

Deliverer/Section:

Vianey Alvarado / Richard Hilaire / EMES

Return Analysis to/Section:

Tom Kux /Raymond Gonzalez / EMES

C.C.#:

992511

Permit :

AW-284

Phone : 305-372-6700

323467



Sample #:

Date : 6/12/2019

Time : 9:53

Collection Point :

MGC\_SB-3

Observation/Known Hazards:

13 JUN '19 12:34

Clock-In Date/Inspector

Sign By Inspector

\*Sign By Lab Custodian

AD13800

5.3

\*Temp.(° C)  
upon Rec.

Return For TCLP / SPLP?

Clock-In Date/Inspector

Date Requested

\*Laboratory ID # / Fridge #

\*Laboratory ID # / Fridge #

14 JUN '19 8:10

\*Take-Out Date/RER Lab

\*Returned-Date/RER Lab

\*Take-Out Date/RER Lab

\*Returned-Date/RER Lab

\*Take-Out Date/RER Lab

For Disposal Date:

See Metal Disposal Log

\*Sample Disposal Date

\*Extracted By / Date

17 JUN '19 11:14

\*Analyzed By / Date

Comments Dark gray fine sand, from 4" to 6" black soil with rock fragments of glass  
N25° 47' 28", W80° 15' 28"

\* By RER Lab \*\* By Contract Lab ^ Please specify the regulatory limit range

Test(s) Run/Method #

Test(s) Run/Method #

As, Ba, Pb

Temp° Iced?

AD13716 5.3 O N

Relinquished To: \*\*Contract Lab

Delivered By / Date:

Received By / Date:

LAB RESULTS ATTACHED

Extracted By / Date:

Analyzed By / Date:

Returned By / Date:

TS  
6/12/19

Revised 02/03/2014



EPA # FL0002

FL CERT E46126

# Office of Laboratory Services

## Sample Analysis Record

R E R

211 W. Flagler St.  
Miami, FL 33130  
(305) 375-1851

### Metals

**Site Description : MELREESE GOLF COURSE**

Blue Card No : 323467      Collected : 06/13/19 9:53  
 LIMS ID : AD13800      Received : 06/13/19 12:34  
 Sampled By : HILAR-RI      Matrix : Solid

Metals	Conc.	MDL/PQL	Unit	DF	Extracted	Digested	Analyzed	By
% Moisture	23.24	n/a	%					
Arsenic by 6010-3050B	38.7	1.0 / 1.5 ( RL/PQL: 1.3 / 2.0 )	mg/Kg	n/a	06/14/19 9:45	06/17/19 10:17	MG	
Barium by 6010-3050B	131	0.3 / 1.2 ( RL/PQL: 0.4 / 1.6 )	mg/Kg	n/a	06/14/19 9:45	06/17/19 10:17	MG	
Lead by 6010-3050B	492	0.3 / 1.2 ( RL/PQL: 0.4 / 1.6 )	mg/Kg	n/a	06/14/19 9:45	06/17/19 10:17	MG	

### Analysis Qualifiers / Comments Description

- No Comment

U = Below MDL MDL = Method Detection Limit I = Between MDL and PQL DF = Dilution Factor All analyses are in compliance with NELAC standards.

Date of Issue

6/17/2019

Page 1 of 1 Note : Multiply MDL(or RL) by Dilution Factor ( 1.0, unless noted otherwise. )

All results being reported under this report apply to the samples analyzed. n/a=Not Applicable

Results are reported in dry wt. unless otherwise noted. RL= Reporting Limits

If you have any questions please contact the QA Officer at 305-375-1851.

Yin Chen / QA Officer

GSU

RUSH

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## MIAMI-DADE COUNTY, FLORIDA

MIAMI-DADE  
COUNTYEPA # FL00025  
FL CERT # E46126

RUSH

## Department of Regulatory and Economic Resources

Environmental Resources Management

Office of Laboratory Services  
MIAMI, FLORIDA 33130-1510  
(305)-375-1851LABORATORY ANALYSIS RECORD  
ENFORCEMENT

Site :

Melreese Golf Course

Address:

1802 NW 37<sup>th</sup> Avenue

Sampler/Section: Vianey Alvarado / Richard Hilaire / EMES

Deliverer/Section: Vianey Alvarado / Richard Hilaire / EMES

Return Analysis to/Section: Tom Kux / Raymond Gonzalez / EMES

C.C.#: 992511 Permit : AW-284 Phone : 305-372-6700

323463

Sample #:

Date : 6/12/2019 Time : 11:06

Collection Point :

MGC\_SB-5

Observation/Known Hazards:

13 JUN '19 12:34

AD13812

Clock-In Date/Inspector

Sign By Inspector

\*Sign By Lab Custodian

\*Laboratory ID #

\*Temp.(° C)  
upon Rec.

Return For TCLP / SPLP?

Clock-In Date/Inspector

Date Requested

\*Laboratory ID # / Fridge #

\*Laboratory ID # / Fridge #

14 JUN '19 8:11

\*Take-Out Date/RER Lab

^Regulatory Limits: SDWA  NPDES  RCRA  Chap. 24  Other Matrix: H2O  Soil/Sludge  Product  Layer  Sewage  Other Preservation: None  Acid  Base  Thermal: Iced  No Iced Sample Bottle  
Prepared Lot #: 050318GSUPicked-Up Date  
By Inspector: 6/12/2019Split Sample? Yes  No  Consultant/Lab:

\*Take-Out Date/RER Lab

Test(s) Run/Method #

Test(s) Run/Method #

As, Ba, Pb

Temp° Iced?

4D13796 5.3 Y N

\*Returned-Date/RER Lab

For Disposal Date:

See Metal Disposal Log

\*Sample Disposal Date

Relinquished To: \*\*Contract Lab

Delivered By / Date:

LAB RESULTS ATTACHED

Received By / Date:

Extracted By / Date:

Analyzed By / Date:

Returned By / Date:

\*Extracted By / Date

\*Analyzed By / Date

Comments

light tan fine grain sand with some shell fragments + glass  
N 25° 47' 22", W 80° 13' 45"



EPA # FL0002  
FL CERT E46126

# Office of Laboratory Services

## Sample Analysis Record

R E R

211 W. Flagler St.  
Miami, FL 33130  
(305) 375-1851

### Metals

**Site Description : MELREESE GOLF COURSE**

Blue Card No : 323463 Collected : 06/13/19 11:06  
LIMS ID : AD13812 Received : 06/13/19 12:34  
Sampled By : HILAR-RI Matrix : Solid

Metals	Conc.	MDL/PQL	Unit	DF	Extracted	Digested	Analyzed	By
% Moisture	18.75	n/a	%					
Arsenic by 6010-3050B	7.2	1.0 / 1.5 ( RL/PQL: 1.2 / 1.9 )	mg/Kg	n/a	06/14/19 9:45	06/17/19 10:31	MG	
Barium by 6010-3050B	6.2	0.3 / 1.2 ( RL/PQL: 0.4 / 1.5 )	mg/Kg	n/a	06/14/19 9:45	06/17/19 10:31	MG	
Lead by 6010-3050B	U	0.3 / 1.2 ( RL/PQL: 0.4 / 1.5 )	mg/Kg	n/a	06/14/19 9:45	06/17/19 10:31	MG	

### Analysis Qualifiers / Comments Description

- No Comment

U = Below MDL MDL = Method Detection Limit I = Between MDL and PQL DF = Dilution Factor All analyses are in compliance with NELAC standards.

Date of Issue

6/17/2019

Page 1 of 1 Note : Multiply MDL(or RL) by Dilution Factor ( 1.0, unless noted otherwise. )

All results being reported under this report apply to the samples analyzed. n/a=Not Applicable

Results are reported in dry wt. unless otherwise noted. RL= Reporting Limits

If you have any questions please contact the QA Officer at 305-375-1851.

Yin Chen / QA Officer

GSU

RUSH

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## MIAMI-DADE COUNTY, FLORIDA

MIAMI-DADE  
COUNTYEPA # FL00025  
FL CERT # E46126

RUSH

## Department of Regulatory and Economic Resources

Environmental Resources Management

Office of Laboratory Services  
MIAMI, FLORIDA 33130-1510  
(305)-375-1851LABORATORY ANALYSIS RECORD  
ENFORCEMENT

Site :

Melreese Golf Course

Address:

1802 NW 37<sup>th</sup> Avenue

Sampler/Section:

Vianey Alvarado / Richard Hilaire / EMES

Deliverer/Section:

Vianey Alvarado / Richard Hilaire / EMES

Return Analysis to/Section:

Tom Kux / Raymond Gonzalez / EMES

C.C.#:

992511

Permit :

AW-284

Phone : 305-372-6700

323461



Sample #:

6/12/2019

Date : 6/12/2019 Time : 10:43

Collection Point :

MGC\_SB-6

Observation/Known Hazards:

13 JUN '19 12:34

Clock-In Date/Inspector

Sign By Inspector

\*Sign By Lab Custodian

AD13808

5.3

\*Temp.(° C)  
upon Rec.

Return For TCLP / SPLP?

Clock-In Date/Inspector

Date Requested

\*Laboratory ID # / Fridge #

\*Laboratory ID # / Fridge #

14 JUN '19 8:11

\*Take-Out Date/RER Lab

^Regulatory Limits: SDWA  NPDES  RCRA  Chap. 24  Other Matrix: H2O  Soil/Sludge  Product  Layer  Sewage  Other Preservation: None  Acid  Base  Thermal: Iced  No Iced Sample Bottle  
Prepared Lot #: 050318GSUPicked-Up Date  
By Inspector: 6/12/2019Split Sample? Yes  No  Consultant/Lab:

\*Returned-Date/RER Lab

\*Take-Out Date/RER Lab

\*Returned-Date/RER Lab

Test(s) Run/Method #

Test(s) Run/Method #

AS, Ba, Pb

Temp° Iced?

AD13796 5.3 (Y) N

Rep. Sample

For Disposal Date:

See Metal Disposal Log

\*Sample Disposal Date

Relinquished To: \*\*Contract Lab

\*Extracted By / Date

Delivered By / Date:

17 JUN '19 11:14

Received By / Date:

\*Analyzed By / Date

Extracted By / Date:

LAB RESULTS ATTACHED

Analyzed By / Date:

Returned By / Date:

Comments light brown fine grain sand with some small <sup>max</sup> fragments  
N25° 47' 31", W80° 15' 45"

\* By RER Lab \*\* By Contract Lab ^ Please specify the regulatory limit range

Revised 02/03/2014



EPA # FL0002

FL CERT E46126

# Office of Laboratory Services

## Sample Analysis Record

R E R

211 W. Flagler St.  
Miami, FL 33130  
(305) 375-1851

### Metals

**Site Description : MELREESE GOLF COURSE**

Blue Card No : 323461      Collected : 06/13/19 10:43  
 LIMS ID : AD13808      Received : 06/13/19 12:34  
 Sampled By : HILAR-RI      Matrix : Solid

Metals	Conc.	MDL/PQL	Unit	DF	Extracted	Digested	Analyzed	By
% Moisture	15.34	n/a	%					
Arsenic by 6010-3050B	32.8	1.0 / 1.5 ( RL/PQL: 1.2 / 1.8 )	mg/Kg	n/a	06/14/19 9:45	06/17/19 10:24	MG	
Barium by 6010-3050B	13.3	0.3 / 1.2 ( RL/PQL: 0.4 / 1.4 )	mg/Kg	n/a	06/14/19 9:45	06/17/19 10:24	MG	
Lead by 6010-3050B	54.9	0.3 / 1.2 ( RL/PQL: 0.4 / 1.4 )	mg/Kg	n/a	06/14/19 9:45	06/17/19 10:24	MG	

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#### Analysis Qualifiers / Comments Description

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- No Comment

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U = Below MDL MDL = Method Detection Limit I = Between MDL and PQL DF = Dilution Factor All analyses are in compliance with NELAC standards.

Date of Issue

6/17/2019

Page 1 of 1 Note : Multiply MDL(or RL) by Dilution Factor ( 1.0, unless noted otherwise. )

All results being reported under this report apply to the samples analyzed. n/a=Not Applicable

Results are reported in dry wt. unless otherwise noted. RL= Reporting Limits

If you have any questions please contact the QA Officer at 305-375-1851.

Yin Chen / QA Officer

GSU

RUSH

S

## MIAMI-DADE COUNTY, FLORIDA

MIAMI-DADE  
COUNTYEPA # FL00025  
FL CERT # E46126

RUSH

## Department of Regulatory and Economic Resources

Environmental Resources Management

Office of Laboratory Services  
MIAMI, FLORIDA 33130-1510  
(305)-375-1851LABORATORY ANALYSIS RECORD  
ENFORCEMENT

Site : Melreese Golf Course

Address: 1802 NW 37<sup>th</sup> Avenue

Sampler/Section: Vianey Alvarado / Richard Hilaire / EMES

Deliverer/Section: Vianey Alvarado / Richard Hilaire / EMES

Return Analysis to/Section: Tom Kux / Raymond Gonzalez / EMES

C.C.#: 992511 Permit : AW-284 Phone : 305-372-6700

Sample #: 323459

Date : 6/12/2019 Time : 11:18

Collection Point :

MGC\_SB-7

Observation/Known Hazards:

13 JUN '19 12:05

Clock-In Date/Inspector

Sign By Inspector

\*Sign By Lab Custodian

AD13814

5.3

Return For TCLP / SPLP?

Clock-In Date/Inspector

Date Requested

\*Laboratory ID # / Fridge #

\*Laboratory ID # / Fridge #

14 JUN '19 8:11

\*Take-Out Date/RER Lab

^Regulatory Limits: SDWA NPDES RCRA Chap. 24 Other

Matrix: H2O Soil/Sludge Product Layer Sewage Other

Preservation: None ✓ Acid Base Thermal: Iced ✓ No Iced

Sample Bottle  
Prepared Lot #: 050318 GSUPicked-Up Date  
By Inspector: 6/12/2019

\*Returned-Date/RER Lab

Split Sample? Yes No ✓ Consultant/Lab:

\*Take-Out Date/RER Lab

Test(s) Run/Method #

Test(s) Run/Method #

As, Ba, Pb

Temp° Iced?

AD13796 Rep. Sample 5.3 FY N

\*Returned-Date/RER Lab

Relinquished To: \*\*Contract Lab \_\_\_\_\_

\*Take-Out Date/RER Lab

For Disposal Date:  
See Metal Disposal Log

Delivered By / Date: \_\_\_\_\_

\*Sample Disposal Date

Received By / Date: \_\_\_\_\_

\*Extracted By / Date

LAB RESULTS ATTACHED

Extracted By / Date: \_\_\_\_\_

Analyzed By / Date: \_\_\_\_\_

Returned By / Date: \_\_\_\_\_

17 JUN '19 11:14

\*Analyzed By / Date

Comments

light brown fine grain sand  
N 25° 47' 27" W 80° 15' 38"

\*By RER Lab \*\* By Contract Lab ^ Please specify the regulatory limit range

Revised 02/03/2014



EPA # FL0002

FL CERT E46126

# Office of Laboratory Services

## Sample Analysis Record

R E R

211 W. Flagler St.  
Miami, FL 33130  
(305) 375-1851

### Metals

**Site Description :** MELREESE GOLF COURSE

Blue Card No : 323459      Collected : 06/13/19 11:18  
 LIMS ID : AD13814      Received : 06/13/19 12:35  
 Sampled By : HILAR-RI      Matrix : Solid

Metals	Conc.	MDL/PQL	Unit	DF	Extracted	Digested	Analyzed	By
% Moisture	18.73	n/a	%					
Arsenic by 6010-3050B	14.1	1.0 / 1.5 ( RL/PQL: 1.2 / 1.9 )	mg/Kg	n/a	06/14/19 9:45	06/17/19 10:33	MG	
Barium by 6010-3050B	5.2	0.3 / 1.2 ( RL/PQL: 0.4 / 1.5 )	mg/Kg	n/a	06/14/19 9:45	06/17/19 10:33	MG	
Lead by 6010-3050B	2.9	0.3 / 1.2 ( RL/PQL: 0.4 / 1.5 )	mg/Kg	n/a	06/14/19 9:45	06/17/19 10:33	MG	

### Analysis Qualifiers / Comments Description

No Comment

U = Below MDL MDL = Method Detection Limit I = Between MDL and PQL DF = Dilution Factor All analyses are in compliance with NELAC standards.

Date of Issue  
6/17/2019

Page 1 of 1 Note : Multiply MDL(or RL) by Dilution Factor ( 1.0, unless noted otherwise. )

All results being reported under this report apply to the samples analyzed. n/a=Not Applicable

Results are reported in dry wt. unless otherwise noted. RL= Reporting Limits

If you have any questions please contact the QA Officer at 305-375-1851.

  
Yin Chen / QA Officer

G54

RUSH

S

## MIAMI-DADE COUNTY, FLORIDA

MIAMI-DADE  
COUNTYEPA # FL00025  
FL CERT # E46126

RUSH

## Department of Regulatory and Economic Resources

Environmental Resources Management

Office of Laboratory Services  
MIAMI, FLORIDA 33130-1510  
(305)-375-1851LABORATORY ANALYSIS RECORD  
ENFORCEMENT

Site : Melreese Golf Course

Address: 1802 NW 37<sup>th</sup> Avenue

Sampler/Section: Vianey Alvarado / Richard Hilaire / EMES

Deliverer/Section: Vianey Alvarado / Richard Hilaire / EMES

Return Analysis to/Section: Tom Kux / Raymond Gonzalez / EMES

C.C.#: 992511 Permit : AW-284 Phone : 305-372-6700

323457

Sample #: 323457Date : 6/12/2019 Time : 11:31

Collection Point :

MGC\_SB-8

Observation/Known Hazards:

12 JUN '19 12:30

Clock-In Date/Inspector

Vianey Alvarado / R.H.

Sign By Inspector

\*Sign By Lab Custodian

AD13796

5.3

\*Laboratory ID #

\*Temp.(°C)  
upon Rec.

Return For TCLP / SPLP?

Clock-In Date/Inspector

Date Requested

\*Laboratory ID # / Fridge #

\*Laboratory ID # / Fridge #

^Regulatory Limits: SDWA  NPDES  RCRA  Chap. 24  Other Matrix: H2O  Soil/Sludge  Product  Layer  Sewage  Other Preservation: None  Acid  Base  Thermal: Iced  No Iced Sample Bottle  
Prepared Lot #: 050318.G5UPicked-Up Date  
By Inspector: 6/12/2019Split Sample? Yes  No  Consultant/Lab:

\*Take-Out Date/RER Lab

Test(s) Run/Method #

Test(s) Run/Method #

As, Ba, Pb

\*Returned-Date/RER Lab

\*Take-Out Date/RER Lab

\*Returned-Date/RER Lab

\*Sample Disposal Date

Relinquished To: \*\*Contract Lab \_\_\_\_\_

\*Extracted By / Date

Delivered By / Date: \_\_\_\_\_

LAB RESULTS ATTACHED

12 JUN '19 11:14

Received By / Date: \_\_\_\_\_

\*Analyzed By / Date

Extracted By / Date: \_\_\_\_\_

Comments

Analyzed By / Date: \_\_\_\_\_

Brown fine grain sand with some rock fragments.  
N25° 47'21", W 80° 15'31"

\* By RER Lab \*\* By Contract Lab ^ Please specify the regulatory limit range

Revised 02/03/2014



EPA # FL0002

FL CERT E46126

# Office of Laboratory Services

## Sample Analysis Record

R E R

211 W. Flagler St.  
Miami, FL 33130  
(305) 375-1851

### Metals

**Site Description : MELREESE GOLF COURSE**

Blue Card No : 323457      Collected : 06/13/19 11:31  
 LIMS ID : AD13796      Received : 06/13/19 12:33  
 Sampled By : HILAR-RI      Matrix : Solid

Metals	Conc.	MDL/PQL	Unit	DF	Extracted	Digested	Analyzed	By
% Moisture	9.55	n/a	%					
Arsenic by 6010-3050B	56.2	1.0 / 1.5 ( RL/PQL: 1.1 / 1.7 )	mg/Kg		n/a	06/14/19 9:45	06/17/19 10:10	MG
								Comment : C14
Barium by 6010-3050B	15.3 J	0.3 / 1.2 ( RL/PQL: 0.3 / 1.3 )	mg/Kg		n/a	06/14/19 9:45	06/17/19 10:10	MG
								Comment : C14,QJ11
Lead by 6010-3050B	89.2	0.3 / 1.2 ( RL/PQL: 0.3 / 1.3 )	mg/Kg		n/a	06/14/19 9:45	06/17/19 10:10	MG
								Comment : C14,QJ15

### Analysis Qualifiers / Comments Description

- QJ15      Estimated value. Matrix spike recovery was outside laboratory control limits due to a parent sample concentration is notably higher than the spike level.
- QJ11      Estimated value. Matrix spike recovery is below QC limits. Results for this analyte in associated samples may be biased low. Batch accepted based on Laboratory Fortified Blank recovery.
- C14      Results confirmed by second analysis.

U = Below MDL   MDL = Method Detection Limit   I = Between MDL and PQL   DF = Dilution Factor   All analyses are in compliance with NELAC standards.

Date of Issue  
6/17/2019

Page 1 of 1   Note : Multiply MDL(or RL) by Dilution Factor ( 1.0, unless noted otherwise. )

All results being reported under this report apply to the samples analyzed. n/a=Not Applicable

Results are reported in dry wt. unless otherwise noted. RL= Reporting Limits

Yin Chen / QA Officer

If you have any questions please contact the QA Officer at 305-375-1851.

GSU

RUSH

S

## MIAMI-DADE COUNTY, FLORIDA

MIAMI-DADE  
COUNTYEPA # FL00025  
FL CERT # E46126

RUSH

LABORATORY ANALYSIS RECORD  
ENFORCEMENT

Department of Regulatory and Economic Resources

Environmental Resources Management

Office of Laboratory Services  
MIAMI, FLORIDA 33130-1510  
(305)-375-1851

Site :

Melreese Golf Course



Address:

1802 NW 37<sup>th</sup> Avenue

Sampler/Section: Vianey Alvarado / Richard Hilaire / EMES

Deliverer/Section: Vianey Alvarado / Richard Hilaire / EMES

Return Analysis to/Section: Tom Kux / Raymond Gonzalez / EMES

C.C.#: 992511 Permit : AW-284 Phone : 305-372-6700

323455

Sample #:

Date : 6/12/2019 Time : 10:30

Collection Point :

MGC\_SB-9

Observation/Known Hazards:

13 JUN '19 12:34

AD13806

Clock-In Date/Inspector

Sign By Inspector

\*Sign By Lab Custodian

\*Laboratory ID #

\*Temp.(° C)  
upon Rec.

Return For TCLP / SPLP?

Clock-In Date/Inspector

Date Requested

\*Laboratory ID # / Fridge #

\*Laboratory ID # / Fridge #

14 JUN '19 8:10

\*Take-Out Date/RER Lab

^Regulatory Limits: SDWA NPDES RCRA Chap. 24 Other

Matrix: H2O Soil/Sludge Product Layer Sewage Other

Preservation: None Acid Base Thermal: Iced No Iced

Sample Bottle  
Prepared Lot #: 050318 GS UPicked-Up Date  
By Inspector: 6/12/2019

Split Sample? Yes No Consultant/Lab:

\*Take-Out Date/RER Lab

Test(s) Run/Method #

Test(s) Run/Method #

As, Ba, Pb

Temp° Iced?

AD13796 5.3 Y N

\*Returned-Date/RER Lab

For Disposal Date:

See Metal Disposal Log

\*Sample Disposal Date

Relinquished To: \*\*Contract Lab

Delivered By / Date:

LAB RESULTS ATTACHED

Received By / Date:

Extracted By / Date:

Analyzed By / Date:

Returned By / Date:

\*Extracted By / Date

\*Analyzed By / Date

Comments light brown fine grain sand w/ small fragments  
N25° 47' 37", W80° 15' 40"

\* By RER Lab \*\* By Contract Lab ^ Please specify the regulatory limit range

Revised 02/03/2014



EPA # FL0002

FL CERT E46126

# Office of Laboratory Services

## Sample Analysis Record

R E R

211 W. Flagler St.  
Miami, FL 33130  
(305) 375-1851

### Metals

**Site Description : MELREESE GOLF COURSE**

Blue Card No : 323455      Collected : 06/13/19 10:30  
 LIMS ID : AD13806      Received : 06/13/19 12:34  
 Sampled By : HILAR-RI      Matrix : Solid

Metals	Conc.	MDL/PQL	Unit	DF	Extracted	Digested	Analyzed	By
% Moisture	15.34	n/a	%					
Arsenic by 6010-3050B	9.4	1.0 / 1.5 ( RL/PQL: 1.2 / 1.8 )	mg/Kg	n/a	06/14/19 9:45	06/17/19 10:22	MG	
Barium by 6010-3050B	8.8	0.3 / 1.2 ( RL/PQL: 0.4 / 1.4 )	mg/Kg	n/a	06/14/19 9:45	06/17/19 10:22	MG	
Lead by 6010-3050B	27.4	0.3 / 1.2 ( RL/PQL: 0.4 / 1.4 )	mg/Kg	n/a	06/14/19 9:45	06/17/19 10:22	MG	

---

#### Analysis Qualifiers / Comments Description

- No Comment

---

U = Below MDL MDL = Method Detection Limit I = Between MDL and PQL DF = Dilution Factor All analyses are in compliance with NELAC standards.

Date of Issue

6/17/2019

Page 1 of 1 Note : Multiply MDL(or RL) by Dilution Factor ( 1.0, unless noted otherwise. )

All results being reported under this report apply to the samples analyzed. n/a=Not Applicable

Results are reported in dry wt. unless otherwise noted. RL= Reporting Limits

If you have any questions please contact the QA Officer at 305-375-1851.

Yin Chen / QA Officer

GSU

RUSH

S

## MIAMI-DADE COUNTY, FLORIDA

MIAMI-DADE  
COUNTYEPA # FL00025  
FL CERT # E46126

RUSH

## Department of Regulatory and Economic Resources

Environmental Resources Management

Office of Laboratory Services  
MIAMI, FLORIDA 33130-1510  
(305)-375-1851LABORATORY ANALYSIS RECORD  
ENFORCEMENT

Site : Melreese Golf Course

Address: 1802 NW 37<sup>th</sup> Avenue

Sampler/Section: Vianey Alvarado / Richard Hilaire / EMES

Deliverer/Section: Vianey Alvarado / Richard Hilaire / EMES

Return Analysis to/Section: Tom Kux / Raymond Gonzalez / EMES

C.C.#: 992511 Permit : AW-284 Phone : 305-372-6700

323453

Sample #: 113

Date : 6/12/2019 Time : 10:17

Collection Point :

MGC\_SB-10

Observation/Known Hazards:

13 JUN '19 12:34

AD13804

Clock-In Date/Inspector

\*Sign By Lab Custodian

\*Laboratory ID #

\*Temp. (° C)  
upon Rec.

Return For TCLP / SPLP?

Clock-In Date/Inspector

Date Requested

\*Laboratory ID # / Fridge #

\*Laboratory ID # / Fridge #

14 JUN '19 8:10

\*Take-Out Date/RER Lab

^Regulatory Limits: SDWA NPDES RCRA Chap. 24 Other

Matrix: H2O Soil/Sludge Product Layer Sewage Other

Preservation: None Acid Base Thermal: Iced No Iced

Sample Bottle  
Prepared Lot #: 050318GSUPicked-Up Date  
By Inspector: 6/12/2019

Split Sample? Yes No Consultant/Lab:

\*Take-Out Date/RER Lab

Test(s) Run/Method #

Test(s) Run/Method #

As, Ba, Pb

Temp° Iced?

AD13796

5.3

Rep. Sample

(Y) N

\*Returned-Date/RER Lab

For Disposal Date:

See Metal Disposal Log

\*Sample Disposal Date

Relinquished To: \*\*Contract Lab

\*Extracted By / Date

Delivered By / Date:

17 JUN '19 11:14

Received By / Date:

\*Analyzed By / Date

Extracted By / Date:

Analyzed By / Date:

Returned By / Date:

LAB RESULTS ATTACHED

SS  
17/19Comments Fine grain Soil, 0"-4" & 4"-6" light gray silt w/ shell fragments & glass  
N 25° 47' 30", W 80° 15' 41"

\*By RER Lab \*\* By Contract Lab ^ Please specify the regulatory limit range

Revised 02/03/2014



EPA # FL0002

FL CERT E46126

# Office of Laboratory Services

## Sample Analysis Record

R E R

211 W. Flagler St.  
Miami, FL 33130  
(305) 375-1851

### Metals

**Site Description : MELREESE GOLF COURSE**

Blue Card No : 323453      Collected : 06/13/19 10:17  
 LIMS ID : AD13804      Received : 06/13/19 12:34  
 Sampled By : HILAR-RI      Matrix : Solid

Metals	Conc.	MDL/PQL	Unit	DF	Extracted	Digested	Analyzed	By
% Moisture	26.72	n/a	%					
Arsenic by 6010-3050B	10.3	1.0 / 1.5 ( RL/PQL: 1.4 / 2.1 )	mg/Kg	n/a	06/14/19 9:45	06/17/19 10:20	MG	
Barium by 6010-3050B	9.3	0.3 / 1.2 ( RL/PQL: 0.4 / 1.6 )	mg/Kg	n/a	06/14/19 9:45	06/17/19 10:20	MG	
Lead by 6010-3050B	4.1	0.3 / 1.2 ( RL/PQL: 0.4 / 1.6 )	mg/Kg	n/a	06/14/19 9:45	06/17/19 10:20	MG	

### Analysis Qualifiers / Comments Description

- No Comment

U = Below MDL MDL = Method Detection Limit I = Between MDL and PQL DF = Dilution Factor All analyses are in compliance with NELAC standards.

Date of Issue  
6/17/2019

Page 1 of 1 Note : Multiply MDL(or RL) by Dilution Factor ( 1.0, unless noted otherwise. )

All results being reported under this report apply to the samples analyzed. n/a=Not Applicable

Results are reported in dry wt. unless otherwise noted. RL= Reporting Limits

If you have any questions please contact the QA Officer at 305-375-1851.

  
Yin Chen / QA Officer

July 02, 2019

Yin Chen  
Department of Regulatory and Economic  
Resources (RER)  
211 West Flagler Street  
Miami, FL 33128

RE: Project: 0136\_E  
Pace Project No.: 35475254

Dear Yin Chen:

Enclosed are the analytical results for sample(s) received by the laboratory on June 14, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Terrence Anderson  
terrence.anderson@pacelabs.com  
954-582-4300  
Project Manager

Enclosures



#### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

## CERTIFICATIONS

Project: 0136\_E  
 Pace Project No.: 35475254

---

### Minnesota Certification IDs

1700 Elm Street SE, Minneapolis, MN 55414-2485  
 A2LA Certification #: 2926.01  
 Alabama Certification #: 40770  
 Alaska Contaminated Sites Certification #: 17-009  
 Alaska DW Certification #: MN00064  
 Arizona Certification #: AZ0014  
 Arkansas DW Certification #: MN00064  
 Arkansas WV Certification #: 88-0680  
 California Certification #: 2929  
 CNMI Saipan Certification #: MP0003  
 Colorado Certification #: MN00064  
 Connecticut Certification #: PH-0256  
 EPA Region 8+Wyoming DW Certification #: via MN 027-053-137  
 Florida Certification #: E87605  
 Georgia Certification #: 959  
 Guam EPA Certification #: MN00064  
 Hawaii Certification #: MN00064  
 Idaho Certification #: MN00064  
 Illinois Certification #: 200011  
 Indiana Certification #: C-MN-01  
 Iowa Certification #: 368  
 Kansas Certification #: E-10167  
 Kentucky DW Certification #: 90062  
 Kentucky WV Certification #: 90062  
 Louisiana DEQ Certification #: 03086  
 Louisiana DW Certification #: MN00064  
 Maine Certification #: MN00064  
 Maryland Certification #: 322  
 Massachusetts Certification #: M-MN064  
 Michigan Certification #: 9909  
 Minnesota Certification #: 027-053-137

Minnesota Dept of Ag Certification #: via MN 027-053-137  
 Minnesota Petrofund Certification #: 1240  
 Mississippi Certification #: MN00064  
 Missouri Certification #: 10100  
 Montana Certification #: CERT0092  
 Nebraska Certification #: NE-OS-18-06  
 Nevada Certification #: MN00064  
 New Hampshire Certification #: 2081  
 New Jersey Certification #: MN002  
 New York Certification #: 11647  
 North Carolina DW Certification #: 27700  
 North Carolina WV Certification #: 530  
 North Dakota Certification #: R-036  
 Ohio DW Certification #: 41244  
 Ohio VAP Certification #: CL101  
 Oklahoma Certification #: 9507  
 Oregon Primary Certification #: MN300001  
 Oregon Secondary Certification #: MN200001  
 Pennsylvania Certification #: 68-00563  
 Puerto Rico Certification #: MN00064  
 South Carolina Certification #: 74003001  
 Tennessee Certification #: TN02818  
 Texas Certification #: T104704192  
 Utah Certification #: MN00064  
 Vermont Certification #: VT-027053137  
 Virginia Certification #: 460163  
 Washington Certification #: C486  
 West Virginia DEP Certification #: 382  
 West Virginia DW Certification #: 9952 C  
 Wisconsin Certification #: 999407970  
 Wyoming UST Certification #: via A2LA 2926.01

---

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: 0136\_E  
 Pace Project No.: 35475254

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35475254001	AD13815 323458	Solid	06/12/19 11:18	06/14/19 16:20
35475254002	AD13813 323462	Solid	06/12/19 11:06	06/14/19 16:20
35475254003	AD13811 323448	Solid	06/12/19 10:53	06/14/19 16:20
35475254004	AD13809 323460	Solid	06/12/19 10:43	06/14/19 16:20
35475254005	AD13807 323454	Solid	06/12/19 10:30	06/14/19 16:20
35475254006	AD13805 323452	Solid	06/12/19 10:17	06/14/19 16:20
35475254007	AD13803 323446	Solid	06/12/19 10:05	06/14/19 16:20
35475254008	AD13801 323466	Solid	06/12/19 09:53	06/14/19 16:20
35475254009	AD13799 323464	Solid	06/12/19 09:38	06/14/19 16:20
35475254010	AD13797 323456	Solid	06/12/19 11:31	06/14/19 16:20

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE ANALYTE COUNT

Project: 0136\_E  
 Pace Project No.: 35475254

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35475254001	AD13815 323458	ASTM D2974	JDL	1	PASI-M
35475254002	AD13813 323462	ASTM D2974	JDL	1	PASI-M
35475254003	AD13811 323448	ASTM D2974	JDL	1	PASI-M
35475254004	AD13809 323460	ASTM D2974	JDL	1	PASI-M
35475254005	AD13807 323454	ASTM D2974	JDL	1	PASI-M
35475254006	AD13805 323452	ASTM D2974	JDL	1	PASI-M
35475254007	AD13803 323446	ASTM D2974	JDL	1	PASI-M
35475254008	AD13801 323466	ASTM D2974	JDL	1	PASI-M
35475254009	AD13799 323464	ASTM D2974	JDL	1	PASI-M
35475254010	AD13797 323456	ASTM D2974	JDL	1	PASI-M

## REPORT OF LABORATORY ANALYSIS

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 without the written consent of Pace Analytical Services, LLC.

## PROJECT NARRATIVE

Project:

Pace Project No.: \_\_\_\_\_

**Method:**

**Description:**

**Client:**

**Date:**

This data package has been reviewed for quality and completeness and is approved for release.

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

## ANALYTICAL RESULTS

Project: 0136\_E  
 Pace Project No.: 35475254

---

Sample: AD13815 323458      Lab ID: 35475254001      Collected: 06/12/19 11:18      Received: 06/14/19 16:20      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	19.2	%	0.10	0.10	1		06/27/19 17:49		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 0136\_E  
 Pace Project No.: 35475254

---

Sample: AD13813 323462      Lab ID: 35475254002      Collected: 06/12/19 11:06      Received: 06/14/19 16:20      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	18.6	%		0.10	0.10	1			06/27/19 17:49

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
 without the written consent of Pace Analytical Services, LLC.

## ANALYTICAL RESULTS

Project: 0136\_E  
Pace Project No.: 35475254

Sample: AD13811 323448 Lab ID: 35475254003 Collected: 06/12/19 10:53 Received: 06/14/19 16:20 Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	18.9	%	0.10	0.10	1		06/27/19 17:50		

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

## ANALYTICAL RESULTS

Project: 0136\_E  
 Pace Project No.: 35475254

---

Sample: AD13809 323460      Lab ID: 35475254004      Collected: 06/12/19 10:43      Received: 06/14/19 16:20      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	16.2	%	0.10	0.10	1		06/27/19 17:50		

## REPORT OF LABORATORY ANALYSIS

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 without the written consent of Pace Analytical Services, LLC.

## ANALYTICAL RESULTS

Project: 0136\_E  
Pace Project No.: 35475254

Sample: AD13807 323454 Lab ID: 35475254005 Collected: 06/12/19 10:30 Received: 06/14/19 16:20 Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	16.3	%	0.10	0.10	1		06/27/19 17:50		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 0136\_E  
 Pace Project No.: 35475254

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Sample: AD13805 323452      Lab ID: 35475254006      Collected: 06/12/19 10:17      Received: 06/14/19 16:20      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	27.3	%	0.10	0.10	1		06/27/19 17:50		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 0136\_E  
 Pace Project No.: 35475254

---

Sample: AD13803 323446      Lab ID: 35475254007      Collected: 06/12/19 10:05      Received: 06/14/19 16:20      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	13.0	%	0.10	0.10	1		06/27/19 17:51		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 0136\_E  
Pace Project No.: 35475254

Sample: AD13801 323466 Lab ID: 35475254008 Collected: 06/12/19 09:53 Received: 06/14/19 16:20 Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	24.1	%	0.10	0.10	1		06/27/19 17:51		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 0136\_E  
Pace Project No.: 35475254

Sample: AD13799 323464 Lab ID: 35475254009 Collected: 06/12/19 09:38 Received: 06/14/19 16:20 Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	26.8	%	0.10	0.10	1		06/27/19 17:51		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 0136\_E  
Pace Project No.: 35475254

Sample: AD13797 323456 Lab ID: 35475254010 Collected: 06/12/19 11:31 Received: 06/14/19 16:20 Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	9.1	%	0.10	0.10	1		06/27/19 17:51		

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 0136\_E  
 Pace Project No.: 35475254

---

QC Batch:	616028	Analysis Method:	ASTM D2974
QC Batch Method:	ASTM D2974	Analysis Description:	Dry Weight / %M by ASTM D2974
Associated Lab Samples:	35475254001, 35475254002, 35475254003, 35475254004, 35475254005, 35475254006, 35475254007, 35475254008, 35475254009, 35475254010		

---

SAMPLE DUPLICATE: 3327716

Parameter	Units	35475254001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	19.2	18.1	6	30	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

## REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: 0136\_E  
Pace Project No.: 35475254

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### LABORATORIES

PASI-M Pace Analytical Services - Minneapolis

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 0136\_E  
 Pace Project No.: 35475254

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35475254001	AD13815 323458	ASTM D2974	616028		
35475254002	AD13813 323462	ASTM D2974	616028		
35475254003	AD13811 323448	ASTM D2974	616028		
35475254004	AD13809 323460	ASTM D2974	616028		
35475254005	AD13807 323454	ASTM D2974	616028		
35475254006	AD13805 323452	ASTM D2974	616028		
35475254007	AD13803 323446	ASTM D2974	616028		
35475254008	AD13801 323466	ASTM D2974	616028		
35475254009	AD13799 323464	ASTM D2974	616028		
35475254010	AD13797 323456	ASTM D2974	616028		

## REPORT OF LABORATORY ANALYSIS

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## MIAMI-DADE COUNTY, FLORIDA



WO# : 35475254

Work Order # 0136\_E



## Department of Regulatory and Economic Resources

Environmental Resources Management

Office of Laboratory Services

211 West Flager Street

MIAMI, FLORIDA 33130-1510

(305)-375-1851

Reference : Bid No FB-01056

Date: June 14, 2019

**From:** Yin Chen, Lab Manager  
 RER Laboratory  
 211 West Flagler Street  
 Miami, FL 33130

**To:** PACE ANALYTICAL  
 P.O. Box 810275  
 Boca Raton, FL 33481-0275  
 (561) 447-7373

Authorized By :

(Must be signed by Lab Manager)

Picked Up By :

Please submit ADaPT-qualified EDD

Note: Please refer to the COCs for the detailed sample information.

If there are any discrepancies with COC and the work order, please contact the RER Lab immediately at 305-375-1851.

LABORATORY ANALYSIS REQUEST

Cost Code	Sample #	Collection Point	Matrix	Parameter	Method #
1. 992511	323458		SOIL	Dioxins and Furans	8290
2. 992511	323462		SOIL	Dioxins and Furans	8290
3. 992511	323448		SOIL	Dioxins and Furans	8290
4. 992511	323460		SOIL	Dioxins and Furans	8290
5. 992511	323454		SOIL	Dioxins and Furans	8290
6. 992511	323452		SOIL	Dioxins and Furans	8290
7. 992511	323446		SOIL	Dioxins and Furans	8290
8. 992511	323466		SOIL	Dioxins and Furans	8290
9. 992511	323464		SOIL	Dioxins and Furans	8290
10. 992511	323456		SOIL	Dioxins and Furans	8290

100D 54  
 LAB: JJ Mar 1620  
 06/14/19 4227 D.C.  
 06/14/19

## WORK ORDER REVIEW &amp; AUTHORIZATION

By (Initial/Date) : \_\_\_\_\_

For Internal Use Only

## Document Check List

- Copy of COC
- Signed Work Order
- Communication Records

## Report Review Check List

- Sample Log-in Correct
- Analysis Performed and Data Reported
- QC Information and COC Included

## Final Report Check List

- PDF Report Issued
- EDD Issued
- Revised Report Issued

Notes: \_\_\_\_\_

Post Check :  Samples Logged Out     COC Scanned     Original COC Returned    Initial/Date: \_\_\_\_\_

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## MIAMI-DADE COUNTY, FLORIDA

MIAMI-DADE  
COUNTYEPA # FL00025  
FL CERT # E46126  
RUS HLABORATORY ANALYSIS RECORD  
ENFORCEMENT

Department of Regulatory and Economic Resources

Environmental Resources Management

Office of Laboratory Services  
MIAMI, FLORIDA 33130-1510  
(305)-375-1851

Site : Melreese Golf Course

Address: 1802 NW 37<sup>th</sup> Avenue

Sampler/Section: Vianey Alvarado / Richard Hilaire / EMES

Deliverer/Section: Vianey Alvarado / Richard Hilaire / EMES

Return Analysis to/Section: Tom Kux / Raymond Gonzalez / EMES

C.C.#: 992511 Permit: AW-284 Phone: 305-372-6700

323458

Sample #:

Date: 6/12/2019 Time: 11:18

Collection Point:

MGC\_SB-7

Observation/Known Hazards:

13 JUN 19 12:35

Clock-In Date/Inspector

Sign By Inspector

\*Sign By Lab Custodian

AD13815

5.3

\*Laboratory ID #

\*Temp.(°C)  
upon Rec.

Return For TCLP / SPLP?

Clock-In Date/Inspector

Date Requested

\*Laboratory ID # / Fridge #

\*Laboratory ID # / Fridge #

\*Take-Out Date/RER Lab

^Regulatory Limits: SDWA  NPDES  RCRA  Chap. 24  Other 

\*Returned-Date/RER Lab

Matrix: H2O  Soil/Sludge  Product  Layer  Sewage  Other 

\*Take-Out Date/RER Lab

Preservation: None  Acid  Base  Thermal: Iced  No Iced 

\*Returned-Date/RER Lab

Sample Bottle

Picked-Up Date

Prepared Lot #: 011419-16KBy Inspector: 6/12/2019

\*Take-Out Date/RER Lab

Split Sample? Yes  No  Consultant/Lab: \_\_\_\_\_

\*Extracted By/Date

Test(s) Run/Method #

Test(s) Run/Method #

DIOXIN (WHO 2005 TEF)

\*Analyzed By/Date

Temp°  Iced? AD13816  5.3  (Y)NComments light brown fine grain sand  
N25° 47'17", W80° 15'38"

Relinquished To: \*\*Contract Lab

J-S 60-0161-NIP-BT

Delivered By / Date:

Received By / Date:

Extracted By / Date:

Analyzed By / Date:

Returned By / Date:

WO# : 35475254

\* By RER Lab \*\* By Contract Lab ^ Please specify the regulatory limit range

PM: TGA

Due Date: 06/25/19

3/2014

CLIENT: 36-DERM

630

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MIAMI-DADE COUNTY, FLORIDA

EPA # FL00025  
FL CERT # E46126

RUS H

Department of Regulatory and Economic Resources

Environmental Resources Management

Office of Laboratory Services  
MIAMI, FLORIDA 33130-1510  
(305)-375-1851LABORATORY ANALYSIS RECORD  
ENFORCEMENT

Site : Melreese Golf Course

Address: 1802 NW 37<sup>th</sup> Avenue

Sampler/Section: Vianey Alvarado / Richard Hilaire / EMES

Deliverer/Section: Vianey Alvarado / Richard Hilaire / EMES

Return Analysis to/Section: Tom Kux / Raymond Gonzalez / EMES

C.C.#: 992511 Permit : AW-284 Phone : 305-372-6700

323462



Sample # :

Date : 6/12/2019 Time : 11:06

Collection Point :

MGC\_SB-5

Observation/Known Hazards:

13 JUN '19 12:34

AD13813

5.3

Clock-In Date/Inspector

Sign By Inspector

\*Sign By Lab Custodian

\*Laboratory ID #

\*Temp.(° C)  
upon Rec.

Return For TCLP / SPLP?

Clock-In Date/Inspector

Date Requested

\*Laboratory ID # / Fridge #

\*Laboratory ID # / Fridge #

\*Take-Out Date/RER Lab

^Regulatory Limits: SDWA\_ NPDES\_ RCRA\_ Chap. 24\_ Other\_

Matrix: H2O\_ Soil/Sludge✓ Product\_ Layer\_ Sewage\_ Other\_

\*Returned-Date/RER Lab

Preservation: None ✓ Acid\_ Base\_ Thermal: Iced✓ No Iced\_

Sample Bottle Prepared Lot #: 011419-16K Picked-Up Date  
By Inspector: 6/12/2019

\*Take-Out Date/RER Lab

Split Sample? Yes\_ No✓ Consultant/Lab:

\*Returned-Date/RER Lab

Test(s) Run/Method #

Test(s) Run/Method #

\*Take-Out Date/RER Lab

Dioxin (WHO 2005 TEF)

Temp° Iced?

\*Sample Disposal Date

Relinquished To: \*\*Contract Lab

\*Extracted By / Date

J.S. GOVT. OF MIAMI

\*Analyzed By / Date

Delivered By / Date:

Comments

Received By / Date:

light tan fine grain sand with some shell fragments + glass

Extracted By / Date:

N 25° 47' 22", W 80° 15' 45"

Analyzed By / Date:

\* By RER Lab \*\* By Contract Lab ^ Please specify the regulatory limit range

Returned By / Date:

WO# : 35475254

PM: TGA

Due Date: 06/25/19

CLIENT: 36-DERM

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GSA

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## MIAMI-DADE COUNTY, FLORIDA

MIAMI-DADE  
COUNTYEPA # FL00025  
FL CERT # E46126

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## Department of Regulatory and Economic Resources

Environmental Resources Management

Office of Laboratory Services  
MIAMI, FLORIDA 33130-1510  
(305)-375-1851LABORATORY ANALYSIS RECORD  
ENFORCEMENT

Site : Melreese Golf Course

Address: 1802 NW 37<sup>th</sup> Avenue

Sampler/Section: Vianey Alvarado / Richard Hilaire / EMES

Deliverer/Section: Vianey Alvarado / Richard Hilaire / EMES

Return Analysis to/Section: Tom Kux /Raymond Gonzalez / EMES

C.C.#: 992511 Permit : AW-284 Phone : 305-372-6700

323448

Sample # :

Date : 6/12/2019 Time : 10:53

Collection Point :

MGC\_SB-1

Observation/Known Hazards:

13 JUN '19 12:34

*Vianey Alvarado / Richard Hilaire*

AD13811

5.3

Clock-In Date/Inspector

Sign By Inspector

\*Sign By Lab Custodian

\*Laboratory ID #

\*Temp.(° C)  
upon Rec.

Return For TCLP / SPLP?

Clock-In Date/Inspector

Date Requested

\*Laboratory ID # / Fridge #

\*Laboratory ID # / Fridge #

\*Take-Out Date/RER Lab

^Regulatory Limits: SDWA  NPDES  RCRA  Chap. 24  Other 

\*Returned-Date/RER Lab

Matrix: H2O  Soil/Sludge  Product  Layer  Sewage  Other 

\*Take-Out Date/RER Lab

Preservation: None  Acid  Base  Thermal: Iced  No Iced 

\*Returned-Date/RER Lab

Sample Bottle Prepared Lot #: 011419-1GK Picked-Up Date

By Inspector: 6/12/2019

\*Take-Out Date/RER Lab

Split Sample? Yes  No  Consultant/Lab:

Test(s) Run/Method #

Test(s) Run/Method #	Test(s) Run/Method #
Dioxin (WHO 2005 TEF)	Temp° Iced?
	AD138196 5.3 (Y) N
	Rep. Sample

\*Sample Disposal Date

Relinquished To: \*\*Contract Lab

\*Extracted By / Date

Delivered By / Date:

\*Analyzed By / Date

Received By / Date:

Comments

Extracted By / Date:

1 right gray fine soil with shell fragments  
N 25° 47' 24", W 80° 15' 49"

Analyzed By / Date:

Returned By / Date:

\* By RER Lab \*\* By Contract Lab ^ Please specify the regulatory limit range

WO# : 35475254

PM: TGA

Due Date: 06/25/19

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CLIENT: 36-DERM

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MIAMI-DADE COUNTY, FLORIDA

EPA # FL00025  
FL CERT # E46126

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Department of Regulatory and Economic Resources

Environmental Resources Management

Office of Laboratory Services  
MIAMI, FLORIDA 33130-1510  
(305)-375-1851LABORATORY ANALYSIS RECORD  
ENFORCEMENT

Site : Melreese Golf Course  
 Address: 1802 NW 37<sup>th</sup> Avenue  
 Sampler/Section: Vianey Alvarado / Richard Hilaire / EMES  
 Deliverer/Section: Vianey Alvarado / Richard Hilaire / EMES  
 Return Analysis to/Section: Tom Kux / Raymond Gonzalez / EMES  
 C.C.#: 992511 Permit : AW-284 Phone : 305-372-6700

323460

Sample # :

Date : 6/12/2019 Time : 10:43

Collection Point :

MGC\_SB-6

Observation/Known Hazards:

18 JUN '19 12:34

AD13809

5.3

Clock-In Date/Inspector

Sign By Inspector

\*Sign By Lab Custodian

\*Laboratory ID #

\*Temp.(°C)  
upon Rec.

Return For TCLP / SPLP?

Clock-In Date/Inspector

Date Requested

\*Laboratory ID # / Fridge #

\*Laboratory ID # / Fridge #

\*Take-Out Date/RER Lab

^Regulatory Limits: SDWA\_ NPDES\_ RCRA\_ Chap. 24\_ Other\_

\*Returned-Date/RER Lab

Matrix: H2O\_ Soil/Sludge  Product\_ Layer\_ Sewage\_ Other\_

\*Take-Out Date/RER Lab

Preservation: None  Acid\_ Base\_ Thermal: Iced  No Iced\_

\*Returned-Date/RER Lab

Sample Bottle  
Prepared Lot #: 01419-1GKPicked-Up Date  
By Inspector: 6/12/2019

\*Take-Out Date/RER Lab

Split Sample? Yes  No  Consultant/Lab:

\*Sample Disposal Date

Test(s) Run/Method #

Test(s) Run/Method #

DIOXIN (WTO 2005 TEF)

Temp° Iced?

AD13796 5.3 (Y) N

\*Extracted By / Date

Relinquished To: \*\*Contract Lab

01/01/61/NATL

\*Analyzed By / Date

Delivered By / Date:

Comments

light brown fine grained sand with some small rock fragments  
N 25° 47' 31", W 80° 15' 45"

\* By RER Lab \*\* By Contract Lab ^ Please specify the regulatory limit range

WO# : 35475254

PM: TGA

Due Date: 06/25/19

CLIENT: 36-DERM

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GSA

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## MIAMI-DADE COUNTY, FLORIDA

MIAMI-DADE  
COUNTYEPA # FL00025  
FL CERT # E46126

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LABORATORY ANALYSIS RECORD  
ENFORCEMENT

Department of Regulatory and Economic Resources

Environmental Resources Management

Office of Laboratory Services  
MIAMI, FLORIDA 33130-1510  
(305)-375-1851

Site : Melreese Golf Course  
 Address: 1802 NW 37<sup>th</sup> Avenue  
 Sampler/Section: Vianey Alvarado / Richard Hilaire / EMES  
 Deliverer/Section: Vianey Alvarado / Richard Hilaire / EMES  
 Return Analysis to/Section: Tom Kux / Raymond Gonzalez / EMES  
 C.C.#: 992511 Permit : AW-284 Phone : 305-372-6700

323454



Sample #:

Date : 6/12/2019 Time : 10:30

Collection Point :

MGC\_SB-9

Observation/Known Hazards:

13 JUN '19 12:34

AD13807

5.3

Clock-In Date/Inspector

Sign By Inspector

\*Sign By Lab Custodian

\*Laboratory ID #

\*Temp.(°C)  
upon Rec.

Return For TCLP / SPLP?

Clock-In Date/Inspector

Date Requested

\*Laboratory ID #/Fridge #

\*Laboratory ID #/Fridge #

\*Take-Out Date/RER Lab

^Regulatory Limits: SDWA  NPDES  RCRA  Chap. 24  Other Matrix: H2O  Soil/Sludge  Product  Layer  Sewage  Other Preservation: None  Acid  Base  Thermal: Iced  No Iced 

Sample Bottle

Prepared Lot #: 011419-161L

Picked-Up Date

By Inspector: 6/12/2019

Split Sample? Yes  No  Consultant/Lab:

\*Take-Out Date/RER Lab

Test(s) Run/Method #

Test(s) Run/Method #

DIOXIN (WHO 2005 TEF)

Temp° Iced?

AD13807

5.3

\*Returned-Date/RER Lab

Rep. Sample

\*Take-Out Date/RER Lab

Relinquished To: \*\*Contract Lab

\*Sample Disposal Date

Delivered By / Date:

\*Extracted By / Date

Received By / Date:

\*Analyzed By / Date

Extracted By / Date:

Comments light brown fine grain sand w/ small <sup>tan</sup> fragments

N25° 47' 37", W80° 15' 40"

\* By RER Lab \*\* By Contract Lab ^ Please specify the regulatory limit range

WO# : 35475254

PM: TGA

Due Date: 06/25/19

CLIENT: 36-DERM

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## MIAMI-DADE COUNTY, FLORIDA

EPA # FL00025  
FL CERT # E46126

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## Department of Regulatory and Economic Resources

Environmental Resources Management

Office of Laboratory Services  
MIAMI, FLORIDA 33130-1510  
(305)-375-1851LABORATORY ANALYSIS RECORD  
ENFORCEMENT

Site : Melreese Golf Course

323452

Address: 1802 NW 37<sup>th</sup> Avenue

Sample #:

Sampler/Section: Vianey Alvarado / Richard Hilaire / EMES

Date : 6/12/2019 Time : 10:17

Deliverer/Section: Vianey Alvarado / Richard Hilaire / EMES

Collection Point :

Return Analysis to/Section: Tom Kux / Raymond Gonzalez / EMES

MGC\_SB-10

C.C.#: 992511 Permit : AW-284 Phone : 305-372-6700

Observation/Known Hazards:

13 JUN '19 12:34

AD13805

Clock-In Date/Inspector

Sign By Inspector

\*Sign By Lab Custodian

\*Laboratory ID #

\*Temp.(° C)  
upon Rec.

Return For TCLP / SPLP?

Clock-In Date/Inspector

Date Requested

\*Laboratory ID # / Fridge #

\*Laboratory ID # / Fridge #

\*Take-Out Date/ RER Lab

^Regulatory Limits: SDWA  NPDES  RCRA  Chap. 24  Other 

\*Returned-Date/ RER Lab

Matrix: H2O  Soil/Sludge  Product  Layer  Sewage  Other 

\*Take-Out Date/ RER Lab

Preservation: None  Acid  Base  Thermal: Iced  No Iced 

\*Returned-Date/ RER Lab

Sample Bottle Picked-Up Date  
Prepared Lot #: 011419-1GK By Inspector: 6/12/2019

\*Take-Out Date/ RER Lab

Split Sample? Yes  No  Consultant/Lab:

\*Sample Disposal Date

Test(s) Run/Method #

Test(s) Run/Method #

Dioxin (W10 2003 TEF)

Temp° Iced?

AD13806

Rep. Sample

5.3

(Y) N

\*Extracted By / Date

Relinquished To: \*\*Contract Lab

\*Analyzed By / Date

Delivered By / Date:

Comments

Received By / Date:

Fine grain soil, 0-4" &amp; 4-6" light gray silt w/ shell fragments &amp; glass

N25° 47' 30", W80° 15' 41"

\* By RER Lab \*\* By Contract Lab ^ Please specify the regulatory limit range

ANALYST: TGA

ANALYST: TGA  
ANALYST: TGA

PM: TGA

Due Date: 06/25/19

CLIENT: 36-DERM

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RUSH

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## MIAMI-DADE COUNTY, FLORIDA

MIAMI-DADE  
COUNTYEPA # FL00025  
FL CERT # E46126

RUSH

## Department of Regulatory and Economic Resources

Environmental Resources Management

Office of Laboratory Services  
MIAMI, FLORIDA 33130-1510  
(305)-375-1851LABORATORY ANALYSIS RECORD  
ENFORCEMENT

Site : \_\_\_\_\_

Melreese Golf Course

323446

Address: \_\_\_\_\_ 1802 NW 37<sup>th</sup> Avenue

Sample #: \_\_\_\_\_

Sampler/Section: \_\_\_\_\_ Vianey Alvarado / Richard Hilaire / EMES

Date : 6/12/2019 Time : 10:05

Deliverer/Section: \_\_\_\_\_ Vianey Alvarado / Richard Hilaire / EMES

Collection Point :

Return Analysis to/Section: \_\_\_\_\_ Tom Kux /Raymond Gonzalez / EMES

MGC\_SB-2

C.C.#: 992511 Permit : AW-284 Phone : 305-372-6700

Observation/Known Hazards:

13 JUN '19 12:34

AD13803

Clock-In Date/Inspector

Sign By Inspector

\*Sign By Lab Custodian

\*Laboratory ID #

\*Temp.(° C)  
upon Rec.

Return For TCLP / SPLP?

Clock-In Date/Inspector

Date Requested \_\_\_\_\_

\*Laboratory ID # / Fridge #

\*Laboratory ID # / Fridge #

^Regulatory Limits: SDWA \_\_\_\_\_ NPDES \_\_\_\_\_ RCRA \_\_\_\_\_ Chap. 24 \_\_\_\_\_ Other \_\_\_\_\_

Matrix: H2O \_\_\_\_\_ Soil/Sludge  Product \_\_\_\_\_ Layer \_\_\_\_\_ Sewage \_\_\_\_\_ Other \_\_\_\_\_Preservation: None  Acid \_\_\_\_\_ Base \_\_\_\_\_ Thermal: Iced  No Iced \_\_\_\_\_

Sample Bottle

Prepared Lot #: 011419-1GK

Picked-Up Date

By Inspector: 6/12/2019

Split Sample? Yes  No  Consultant/Lab: \_\_\_\_\_

\*Take-Out Date/RER Lab

Test(s) Run/Method #

Test(s) Run/Method #

DIOXIN (WHO 2005 TEF)

Temp°

Iced?

AD13803

Rep. Sample

5.3

Y

\*Returned-Date/RER Lab

\*Take-Out Date/RER Lab

\*Returned-Date/RER Lab

\*Extracted By / Date

\*Analyzed By / Date

Relinquished To: \*\*Contract Lab

Delivered By / Date:

Received By / Date:

Extracted By / Date:

Analyzed By / Date:

Returned By / Date:

Comments Fine light brown grain sand

N 25° 47' 28", W 80° 15' 33"

W0# : 35475254

\* By RER Lab \*\* By Contract Lab ^ Please specify the regulatory limit range

PM: TGA

Due Date: 06/25/19

CLIENT: 36-DERM

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GS4

RUSH

MIAMI-DADE COUNTY, FLORIDA

MIAMI-DADE  
COUNTYEPA # FL00025  
FL CERT # E46126

RUSH

Department of Regulatory and Economic Resources

Environmental Resources Management

Office of Laboratory Services  
MIAMI, FLORIDA 33130-1510  
(305)-375-1851LABORATORY ANALYSIS RECORD  
ENFORCEMENT

Site :

Melreese Golf Course

323466

Address: 1802 NW 37<sup>th</sup> Avenue

Sample #:

Sampler/Section: Vianey Alvarado / Richard Hilaire / EMES

Date : 6/12/2019 Time : 9:53

Deliverer/Section: Vianey Alvarado / Richard Hilaire / EMES

Collection Point :

Return Analysis to/Section: Tom Kux /Raymond Gonzalez / EMES

MGC\_SB-3

C.C.#: 992511 Permit : AW-284 Phone : 305-372-6700

Observation/Known Hazards:

13 JUN '19 12:34

AD13801

Clock-In Date/Inspector

Sign By Inspector

\*Sign By Lab Custodian

\*Laboratory ID #

\*Temp.(° C)  
upon Rec.

Return For TCLP / SPLP?

Clock-In Date/Inspector

Date Requested

\*Laboratory ID # / Fridge #

\*Laboratory ID # / Fridge #

\*Take-Out Date/RER Lab

^Regulatory Limits: SDWA \_ NPDES \_ RCRA \_ Chap. 24 \_ Other \_

\*Returned-Date/RER Lab

Matrix: H2O \_ Soil/Sludge ✓ Product \_ Layer \_ Sewage \_ Other \_

Preservation: None ✓ Acid \_ Base \_ Thermal: Iced ✓ No Iced \_

Sample Bottle

Prepared Lot #: 011419-1G1K

Picked-Up Date

By Inspector: 6/12/2019

\*Take-Out Date/RER Lab

Split Sample? Yes \_ No ✓ Consultant/Lab:

\*Take-Out Date/RER Lab

Test(s) Run/Method # Test(s) Run/Method #

\*Returned-Date/RER Lab

Dioxin (WTO 2005 TEF)

\*Take-Out Date/RER Lab

Temp° Iced?

\*Sample Disposal Date

AD13796

\*Extracted By / Date

\*Analyzed By / Date

5.3

(Y) N

Relinquished To: \*\*Contract Lab

Delivered By / Date:

Received By / Date:

Extracted By / Date:

Analyzed By / Date:

Returned By / Date:

Comments Dark gray fine sand, from 4" to 6" black soil with rock fragments of glass  
N 25° 47' 28", W 80° 15' 28"

WO# : 35475254

\* By RER Lab \*\* By Contract Lab ^ Please specify the regulatory limit range

PM: TGA  
CLIENT: 36-DERMDue Date: 06/25/19  
Page 27 of 52

GSU

RUSH

S

## MIAMI-DADE COUNTY, FLORIDA

MIAMI-DADE  
COUNTYEPA # FL00025  
FL CERT # E46126

RUSH

## Department of Regulatory and Economic Resources

Environmental Resources Management

Office of Laboratory Services  
MIAMI, FLORIDA 33130-1510  
(305)-375-1851LABORATORY ANALYSIS RECORD  
ENFORCEMENT

Site : Melreese Golf Course

Address: 1802 NW 37<sup>th</sup> Avenue

Sampler/Section: Vianey Alvarado / Richard Hilaire / EMES

Deliverer/Section: Vianey Alvarado / Richard Hilaire / EMES

Return Analysis to/Section: Tom Kux / Raymond Gonzalez / EMES

C.C.#: 992511 Permit : AW-284 Phone : 305-372-6700

323464



Sample #:

Date : 6/12/2019 Time : 9:38

Collection Point :

MGC\_SB-4

Observation/Known Hazards:

13 JUN '19 12:34

AD13799

5.3

Clock-In Date/Inspector

Vianey Alvarado / E18

\*Sign By Inspector

\*Laboratory ID #

\*Temp. (° C)  
upon Rec.

Return For TCLP / SPLP?

Clock-In Date/Inspector

Date Requested

\*Laboratory ID # / Fridge #

\*Laboratory ID # / Fridge #

\*Take-Out Date/RER Lab

^Regulatory Limits: SDWA  NPDES  RCRA  Chap. 24  Other Matrix: H2O  Soil/Sludge  Product  Layer  Sewage  Other Preservation: None  Acid  Base  Thermal: Iced  No Iced 

Sample Bottle

Prepared Lot #: 011419-1 G1K

Picked-Up Date

By Inspector: 6/12/2019

Split Sample? Yes  No  Consultant/Lab:

\*Take-Out Date/RER Lab

Test(s) Run/Method #

Test(s) Run/Method #

Dioxin (WHO 2005 TEF)

Temp ° Iced?

AD13796

5.3

(Y) N

\*Returned-Date/RER Lab

\*Take-Out Date/RER Lab

Relinquished To: \*\*Contract Lab

TS

6/14/19

\*Sample Disposal Date

Delivered By / Date:

\*Extracted By / Date

Received By / Date:

\*Analyzed By / Date

Extracted By / Date:

Comments organic matter, roots, grass, fine sand

Analyzed By / Date:

N 25° 47' 30", W 80° 15' 26"

Returned By / Date:

WO# : 35475254

\* By RER Lab \*\* By Contract Lab ^ Please specify the regulatory limit range

PM: TGA

Due Date: 06/25/19

CLIENT: 36-DERM

G54

RUSH

S

MIAMI-DADE COUNTY, FLORIDA

MIAMI-DADE  
COUNTYEPA # FL00025  
FL CERT # E46126

RUSH

Department of Regulatory and Economic Resources

Environmental Resources Management

Office of Laboratory Services  
MIAMI, FLORIDA 33130-1510  
(305)-375-1851LABORATORY ANALYSIS RECORD  
ENFORCEMENT

Site : Melreese Golf Course

Address: 1802 NW 37<sup>th</sup> Avenue

Sampler/Section: Vianey Alvarado / Richard Hilaire / EMES

Deliverer/Section: Vianey Alvarado / Richard Hilaire / EMES

Return Analysis to/Section: Tom Kux / Raymond Gonzalez / EMES

C.C.#: 992511 Permit : AW-284 Phone : 305-372-6700

323456



Sample # :

Date : 6/12/2019 Time : 11:31

Collection Point :

MGC\_SB-8

Observation/Known Hazards:

13 JUN '19 12:33

AD13797

Clock-In Date/Inspector

Sign By Inspector

\*Sign By Lab Custodian

\*Laboratory ID #

\*Temp.(° C)  
upon Rec.

Return For TCLP / SPLP?

Clock-In Date/Inspector

Date Requested

\*Laboratory ID # / Fridge #

\*Laboratory ID # / Fridge #

\*Take-Out Date/RER Lab

^Regulatory Limits: SDWA NPDES RCRA Chap. 24 Other

\*Returned-Date/RER Lab

Matrix: H2O Soil/Sludge Product Layer Sewage Other

\*Take-Out Date/RER Lab

Preservation: None Acid Base Thermal: Iced No Iced

\*Returned-Date/RER Lab

Sample Bottle  
Prepared Lot #: 011419 - 1G1LPicked-Up Date  
By Inspector: 6/12/2019

\*Take-Out Date/RER Lab

Split Sample? Yes No ✓ Consultant/Lab:

Test(s) Run/Method #

Test(s) Run/Method #

DIOXIN (WHO 2005 TEF)

Temp° Iced?

AD13797 5.3 (Y) N

\*Sample Disposal Date

Relinquished To: \*\*Contract Lab

\*Extracted By / Date

Delivered By / Date:

OT: DT ST, NOV 17

\*Analyzed By / Date

Received By / Date:

Extracted By / Date:

Analyzed By / Date:

Returned By / Date:

Comments Brown Fine Grarn Sand with Some rock fragements.

N25° 47' 21", W 80° 15' 31"

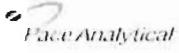
\* By RER Lab \*\* By Contract Lab ^ Please specify the regulatory limit range

WO# : 35475254

PM: TGA

Due Date: 06/25/2052

CLIENT: 36-DERM

	Document Name Sample Condition Upon Receipt Form	Document Rev. See May 30, 2018
	Document No. S.P.L.C-007 rev. 13	Issuing Authority Pace Florida Quality Office

**Sample Condition Upon Receipt Form (SCUR)**

**WO# : 35475254**

**Project** PM: TGA      **Due Date:** 06/25/19  
**Project Manager** CLIENT: 36-DERM  
**Client**

Thermometer Used T-33D Date 6.14.19 Time 1620 Initials WD

State of Origin FL  For all projects, all containers verified to <6°C

Cooler #1 Temp. °C <u>0.6</u> (Visual) <u>0.0</u> (Correction Factor) <u>0.6</u> (Actual)	<input type="checkbox"/> Samples on ice cooling process has begun
Cooler #2 Temp. °C _____ (Visual) _____ (Correction Factor) _____ (Actual)	<input type="checkbox"/> Samples on ice cooling process has begun
Cooler #3 Temp. °C _____ (Visual) _____ (Correction Factor) _____ (Actual)	<input type="checkbox"/> Samples on ice cooling process has begun
Cooler #4 Temp. °C _____ (Visual) _____ (Correction Factor) _____ (Actual)	<input type="checkbox"/> Samples on ice cooling process has begun
Cooler #5 Temp. °C _____ (Visual) _____ (Correction Factor) _____ (Actual)	<input type="checkbox"/> Samples on ice cooling process has begun
Cooler #6 Temp. °C _____ (Visual) _____ (Correction Factor) _____ (Actual)	<input type="checkbox"/> Samples on ice cooling process has begun

Courier:  FedEx  UPS  USPS  Client  Commercial  Pace

Shipping Method: First Overnight Priority Overnight Standard Overnight Ground  International Priority

Other \_\_\_\_\_

Billing: Recipient Sender Third Party Credit Card Unknown

Tracking #: \_\_\_\_\_

Custody Seal on Cooler/Box Present:  Yes  No Seals intact:  Yes  No Ice:  Wet Blue Dry None

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Samples shorted to lab (If Yes, complete) Shorted Date \_\_\_\_\_ Shorted Time \_\_\_\_\_ Qty \_\_\_\_\_

Comments:

Chain of Custody Present	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
Chain of Custody Filled Out	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
Relinquished Signature & Sampler Name COC	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
Samples Arrived within Hold Time	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
Rush TAT requested on COC	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A	<u>RUSH</u>
Sufficient Volume	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
Correct Containers Used	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
Containers Intact	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
Sample Labels match COC (sample IDs & date/time of collection)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A	<u>NO TIME ON LABELS</u> <u>06/14/19</u>
All containers needing acid/base preservation have been checked	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	Preservative _____
All Containers needing preservation are found to be in compliance with EPA recommendation	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	Lot # Trace #: _____ Date _____ Time _____ Initials _____
Exceptions: VOA Co-form TCG O&G Carbamates				
Headspace in VOA Vials? (>6mm)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
Trip Blank Present	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	

Client Notification/ Resolution:

Person Contacted \_\_\_\_\_ Date Time \_\_\_\_\_

Comments/ Resolution (use back for additional comments):  
 \_\_\_\_\_  
 \_\_\_\_\_

**Report Prepared for:**

Terrence Anderson  
PASI Florida  
8 East Tower Circle  
Ormond Beach FL 32174

**REPORT OF  
LABORATORY  
ANALYSIS FOR  
PCDD/PCDF**

**Report Prepared Date:**

July 2, 2019

**Report Information:**

Pace Project #: 10479477  
Sample Receipt Date: 06/15/2019  
Client Project #: 35475254  
Client Sub PO #: N/A  
State Cert #: E87605

**Invoicing & Reporting Options:**

The report provided has been invoiced as a Level 2 PCDD/PCDF Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Kirsten Hogberg, your Pace Project Manager.

This report has been reviewed by:



July 02, 2019

Kirsten Hogberg, Project Manager  
(612) 607-6407  
(612) 607-6444 (fax)  
kirsten.hogberg@pacelabs.com



**Report of Laboratory Analysis**

This report should not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

The results relate only to the samples included in this report.

Page 31 of 52



Pace Analytical Services, LLC.  
1700 Elm Street  
Minneapolis, MN 55414  
Phone: 612.607.1700  
Fax: 612.607.6444

## **DISCUSSION**

This report presents the results from the analyses performed on ten samples submitted by a representative of Pace Analytical Services, LLC. The samples were analyzed for the presence or absence of polychlorodibenz-p-dioxins (PCDDs) and polychlorodibenzofurans (PCDFs) using a modified version of USEPA Method 8290. The reporting limits were based on signal-to-noise measurements. Estimated Maximum Possible Concentration (EMPC) values were treated as positives in the toxic equivalence calculations. Per request, estimated detection limit (EDL) values were provided and flagged "U" where the target analytes were not detected.

Second column confirmation analyses of 2,3,7,8-TCDF values obtained from the primary (DB5-MS) column are performed only when specifically requested for a project and only when the values are above the concentration of the lowest calibration standard. Typical resolution for this isomer using the DB5-MS column ranges from 25-30%.

The recoveries of the isotopically-labeled PCDD/PCDF internal standards in the sample extracts ranged from 50-100%. All of the labeled internal standard recoveries obtained for this project were within the 40-135% target range specified in Method 8290. Also, since the quantification of the native 2,3,7,8-substituted congeners was based on isotope dilution, the data were automatically corrected for recovery and accurate values were obtained.

Values were flagged "I" where incorrect isotope ratios were obtained. Concentrations below the calibration range were flagged "J" and should be regarded as estimates.

A laboratory method blank was prepared and analyzed with the sample batch as part of our routine quality control procedures. The results show the blank to contain trace levels of selected congeners. These levels were below the calibration range of the method. Sample levels similar to the corresponding blank levels were flagged "B" on the results tables and may be, at least partially, attributed to the background. It should be noted that levels less than ten times the background are not generally considered to be statistically different from the background.

A laboratory spike sample was also prepared with the sample batch using reference material that had been fortified with native standards. The recoveries of the spiked native compounds ranged from 93-113%. These results were within the target range for the method. Matrix spikes were prepared with the sample batch using sample material from a separate project; results from these analyses will be provided upon request.

## **REPORT OF LABORATORY ANALYSIS**

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Page 32 of 52



Pace Analytical Services, LLC  
1700 Elm Street - Suite 200  
Minneapolis, MN 55414

Tel: 612-607-1700  
Fax: 612-607-6444

## Minnesota Laboratory Certifications

Authority	Certificate #	Authority	Certificate #
A2LA	2926.01	Minnesota - Pet	1240
Alabama	40770	Mississippi	MN00064
Alaska - DW	MN00064	Missouri - DW	10100
Alaska - UST	17-009	Montana	CERT0092
Arizona	AZ0014	Nebraska	NE-OS-18-06
Arkansas - DW	MN00064	Nevada	MN00064
Arkansas - WW	88-0680	New Hampshire	2081
CNMI Saipan	MP0003	New Jersey (NE)	MN002
California	2929	New York	11647
Colorado	MN00064	North Carolina	27700
Connecticut	PH-0256	North Carolina -	27700
EPA Region 8+	via MN 027-053	North Carolina -	530
Florida (NELAP)	E87605	North Dakota	R-036
Georgia	959	Ohio - DW	41244
Guam	17-001r	Ohio - VAP	CL101
Hawaii	MN00064	Oklahoma	9507
Idaho	MN00064	Oregon - Primar	MN300001
Illinois	200011	Oregon - Secon	MN200001
Indiana	C-MN-01	Pennsylvania	68-00563
Iowa	368	Puerto Rico	MN00064
Kansas	E-10167	South Carolina	74003
Kentucky - DW	90062	South Dakota	NA
Kentucky - WW	90062	Tennessee	TN02818
Louisiana - DE	03086	Texas	T104704192
Louisiana - DW	MN00064	Utah (NELAP)	MN00064
Maine	MN00064	Virginia	460163
Maryland	322	Washington	C486
Massachusetts	M-MN064	West Virginia -	382
Michigan	9909	West Virginia -	9952C
Minnesota	027-053-137	Wisconsin	999407970
Minnesota - De	via MN 027-053	Wyoming - UST	2926.01

## REPORT OF LABORATORY ANALYSIS

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Report No.....10479477  
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## **Appendix A**

### Sample Management

# Chain of Custody

Samples were sent directly to the Subcontracting Laboratory.

Workorder: 35475254 Workorder Name: 0136\_E

State Of Origin: FL

Cert. Needed:  Yes  No

Owner Received Date: 6/14/2019 Results Requested By: 6/25/2019

WO# : 10479477



10479477

Terrence Anderson  
Pace Analytical South Florida  
3610 Park Central Blvd N  
Pompano Beach, FL 33064  
Phone 954-582-4300

Pace Analytical Minnesota  
1700 Elm Street SE  
Suite 200  
Minneapolis, MN 55414  
Phone (612)607-1700

06/14/19  
06/14/19

Sample ID	Description	Type	Date/Time	Sample ID	Status	Custody Seal										LAB USE ONLY	
						1	2	3	4	5	6	7	8	9	10		
1 AD13815 323458		PS	6/12/2019 11:18	35475254001	Solid	1											001
2 AD13813 323462		PS	6/12/2019 11:06	35475254002	Solid	1											002
3 AD13811 323448		PS	6/12/2019 10:53	35475254003	Solid	1											003
4 AD13809 323460		PS	6/12/2019 10:43	35475254004	Solid	1											004
5 AD13807 323454		PS	6/12/2019 10:30	35475254005	Solid	1											005
6 AD13805 323452		PS	6/12/2019 10:17	35475254006	Solid	1											006
7 AD13803 323446		PS	6/12/2019 10:05	35475254007	Solid	1											007
8 AD13801 323466		PS	6/12/2019 09:53	35475254008	Solid	1											008
9 AD13798 323464		PS	6/12/2019 09:38	35475254009	Solid	1											009
10 AD13797 323456		PS	6/12/2019 11:31	35475254010	Solid	1											010

Transfers	Released By	Date/Time	Received By	Date/Time
1	<i>[Signature]</i>	6/14/19 1600	<i>[Signature]</i> Pace	6/15/19 0930
2				
3				

Cooler Temperature on Receipt	1.9 °C	Custody Seal (Y) or N	Received on Ice (Y) or N	Samples Intact (Y) or N

\*\*\*In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.

This chain of custody is considered complete as is since this information is available in the owner laboratory.

	Document Name: <b>Regulated Soil Checklist</b>	Document Revised: 13Feb2018 Page 1 of 2
	Document No.: <b>F-MN-Q-338-Rev.06</b>	Issuing Authority: Pace Minnesota Quality Office

### USDA REGULATED SOIL CHECKLIST

To Be Completed by SR Staff:

WO: 10479477

Date: 6/15/19

Initials: CG

Sample Origin (circle one):

**DOMESTIC**

**QUARANTINED**

**FOREIGN**

(Note: soil samples from Hawaii, Guam, Puerto Rico and the US Virgin Islands are considered to be of a Foreign Source)

If Domestic, circle State of Origin: AL AR CA FL GA LA MS NC NM NY OK OR SC TN TX VA  
(Includes: IFA, SOD, Golden Nematode, Karnal Bunt and Witchweed)

List County: Miami-Dade

(USDA Permit/Compliance Agreement authorizes movement of samples from these domestic regulated zones)

If Quarantined, circle State of Origin: FL ID TX CA List County:

(Includes Fruit Fly, Giant African Snail and Pale Cyst Nematode)

(Movement Is not authorized for Pale Cyst Nematode [ID or Giant African Snail [FL], remaining quarantines require additional paperwork)

If Foreign, list Country of Origin:

(Movement from some Canadian Provinces Is not allowed. Refer to CS-232 Regulated Soil Flow Chart)

REQUIREMENT	ACTION	COMPLETED
PPQ-530 Paperwork must be included for any samples from counties with a Fruit Fly Quarantine in TX. Refer to MN-S063 through MN-S065	Scan PPQ-530 to the corresponding Project folder on the x drive. If PPQ-530 is not present, contact the Waste Coordinator and do not continue processing samples.	YES NO <i>N/A</i>
Samples from ID may not be moved from the quarantined region. Refer to MN-S055	If samples originated in a quarantined zone, contact the Waste Coordinator and do not continue processing samples.	YES NO <i>N/A</i>
Samples from Giant African Snail Quarantine in FL may not be moved from the quarantined region. Refer to MN-S068	If samples originated in a quarantined zone, contact the Waste Coordinator and do not continue processing samples.	YES NO <i>N/A</i>
REQUIREMENT	ACTION	COMPLETED
"Special Handling" stickers are to be placed on all samples.	Did "special handling" stickers get placed on all sample containers?	<i>YES</i> NO
Samples must be segregated and stored in designated bins, shelves and coolers.	Were samples placed in a designated cooler, containers and shelves?	<i>YES</i> NO
Samples must be double contained to prevent accidental release.	Were there any signs of breakage or leakage (check for broken glass and/or loose soil in the cooler)? <i>If NO, ice and melt water can be disposed of by normal process (down the drain).</i> If YES, were ice and melt water separated from the cooler and disposed of properly? Any broken glass and/or loose soil are to be bagged and placed in a USDA Regulated satellite container or active drum (see Waste Coordinator). Ice and melt water should be baked at a temperature range of 121-154°F for 2 hours and then cooled before going down the drain.	YES NO <i>N/A</i>
Equipment and supplies that have come into contact samples must be decontaminated.	Was the cooler(s) and/or countertop(s) decontaminated using either a fresh 10% bleach solution or 70% ethanol? (Gloves and other lab supplies will be bagged and placed in the USDA Regulated satellite container or active drum).	<i>YES</i> NO

Comments:

	Document Name: <b>Regulated Soil Checklist</b>	Document Revised: 13Feb2018 Page 2 of 2
	Document No.: <b>F-MN-Q-338-Rev.06</b>	Issuing Authority: Pace Minnesota Quality Office

To Be Completed by PM and/or PC:

Sample Analysis to be conducted (circle all that apply):

MN

Subcontract Lab

Name of Subcontract Lab(s):

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REQUIREMENT	ACTION	COMPLETED
Permission to ship untreated soil must be on file prior to shipping to any subcontract lab, including IR Pace Labs.	Go to: J:\SHARE\PRJ_MGR\10_Client Services Department Documents\Regulated Soils Permits – if permission to ship letter is not there, contact the Waste Coordinator.	YES    NO <b>N/A</b>
Shipment must include a valid copy of the receiving lab's permit as well as permission to ship letter.	Is a copy of all needed paperwork included with the COC? Do NOT ship samples until all necessary paperwork is compiled.	YES    NO <b>N/A</b>

Comments:

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Project Manager Signature:



Date: 6/18/2019

	Document Name: <b>Sample Condition Upon Receipt Form</b>	Document Revised: 09May2019 Page 1 of 1
	Document No.: <b>F-MN-L-213-rev.28</b>	Issuing Authority: <b>Pace Minnesota Quality Office</b>

Sample Condition Upon Receipt	Client Name: <i>Pace South Florida</i>	Project #:	<b>WO# : 10479477</b>
Courier:	<input checked="" type="checkbox"/> FedEx <input type="checkbox"/> UPS <input type="checkbox"/> USPS <input type="checkbox"/> Client <input type="checkbox"/> Pace <input type="checkbox"/> SpeeDee <input type="checkbox"/> Commercial See Exception	PM: KNH    Due Date: 07/01/19	
Tracking Number:	496151343500	CLIENT: PASI-FL	
Custody Seal on Cooler/Box Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Seals Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No    Biological Tissue Frozen? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Packing Material:	<input checked="" type="checkbox"/> Bubble Wrap <input checked="" type="checkbox"/> Bubble Bags <input type="checkbox"/> None <input checked="" type="checkbox"/> Other: DB	Temp Blank?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Thermometer:	<input checked="" type="checkbox"/> T1(0461) <input checked="" type="checkbox"/> T2(1336) <input type="checkbox"/> T3(0459) <input type="checkbox"/> T4(0254) <input type="checkbox"/> T5(0489)	Type of Ice:	<input checked="" type="checkbox"/> Wet <input type="checkbox"/> Blue <input type="checkbox"/> None <input type="checkbox"/> Dry <input type="checkbox"/> Melted

Note: Each West Virginia Sample must have temp taken (no temp blanks)

Temp should be above freezing to 6°C	Cooler Temp Read w/temp blank: 1.8 °C	Average Corrected Temp See Exceptions (no temp blank only): <input type="checkbox"/>
Correction Factor: +0.1	Cooler Temp Corrected w/temp blank: 1.9 °C	KNH 6/18/19 °C

USDA Regulated Soil: ( N/A, water sample/Other: \_\_\_\_\_) Date/Initials of Person Examining Contents: CG 6/15/19  
Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)?  Yes     No  
Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)?  Yes     No  
If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

	COMMENTS:	
Chain of Custody Present and Filled Out?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	1.
Chain of Custody Relinquished?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	2.
Sampler Name and/or Signature on COC?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	3.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	4.
Short Hold Time Analysis (<72 hr)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	5. <input type="checkbox"/> Fecal Coliform <input type="checkbox"/> HPC <input type="checkbox"/> Total Coliform/E coli <input type="checkbox"/> BOD/cBOD <input type="checkbox"/> Hex Chrome <input type="checkbox"/> Turbidity <input type="checkbox"/> Nitrate <input type="checkbox"/> Nitrite <input type="checkbox"/> Orthophos <input type="checkbox"/> Other
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	7.
Correct Containers Used? -Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	8.
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
Field Filtered Volume Received for Dissolved Tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10. Is sediment visible in the dissolved container? <input type="checkbox"/> Yes <input type="checkbox"/> No
Is sufficient information available to reconcile the samples to the COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	11. If no, write ID/Date/Time on Container Below: See Exception <input type="checkbox"/>
Matrix: <input type="checkbox"/> Water <input checked="" type="checkbox"/> Soil <input type="checkbox"/> Oil <input type="checkbox"/> Other		
All containers needing acid/base preservation have been checked?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12. Sample #  <input type="checkbox"/> NaOH <input type="checkbox"/> HNO <sub>3</sub> <input type="checkbox"/> H <sub>2</sub> SO <sub>4</sub> <input type="checkbox"/> Zinc Acetate  Positive for Res. <input type="checkbox"/> Yes Chlorine? <input type="checkbox"/> No    pH Paper Lot# <input type="checkbox"/> Res. Chlorine    0-6 Roll    0-6 Strip    0-14 Strip
Headspace In VOA Vials (greater than 6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13. See Exception <input type="checkbox"/>
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14. Pace Trip Blank Lot # (if purchased): A/A

#### CLIENT NOTIFICATION/RESOLUTION

Field Data Required?  Yes     No

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
Comments/Resolution: \_\_\_\_\_

Project Manager Review: *Vicki Hofford*

Date: 6/18/2019

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled by: *MK*



## Reporting Flags

- A = Reporting Limit based on signal to noise
- B = Less than 10x higher than method blank level
- C = Result obtained from confirmation analysis
- D = Result obtained from analysis of diluted sample
- E = Exceeds calibration range
- I = Interference present
- J = Estimated value
- L = Suppressive interference, analyte may be biased low
- Nn = Value obtained from additional analysis
- P = PCDEInterference
- R = Recovery outside target range
- S = Peak saturated
- U = Analyte not detected
- V = Result verified by confirmation analysis
- X = %D Exceeds limits
- Y = Calculated using average of daily RFs
- \* = See Discussion

### REPORT OF LABORATORY ANALYSIS

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## **Appendix B**

### **Sample Analysis Summary**



Pace Analytical Services, LLC  
1700 Elm Street - Suite 200  
Minneapolis, MN 55414

Tel: 612-607-1700  
Fax: 612-607-6444

## Method 8290 Sample Analysis Results

Client - PASI Florida

Client's Sample ID	AD13815 323458					
Lab Sample ID	35475254001					
Filename	F190629A_05					
Injected By	JRH					
Total Amount Extracted	12.6 g			Matrix	Solid	
% Moisture	19.2			Dilution	NA	
Dry Weight Extracted	10.2 g			Collected	06/12/2019 11:18	
ICAL ID	F190620			Received	06/15/2019 09:30	
CCal Filename(s)	F190628B_17 & F190629A_17			Extracted	06/25/2019 15:10	
Method Blank ID	BLANK-71439			Analyzed	06/29/2019 03:12	

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.070 U	—	0.070	2,3,7,8-TCDF-13C	2.00	78
Total TCDF	0.27	—	0.070 BJ	2,3,7,8-TCDD-13C	2.00	77
2,3,7,8-TCDD	0.044 U	—	0.044	1,2,3,7,8-PeCDF-13C	2.00	68
Total TCDD	0.44	—	0.044 J	2,3,4,7,8-PeCDF-13C	2.00	77
1,2,3,7,8-PeCDF	0.060 U	—	0.060	1,2,3,6,7,8-HxCDF-13C	2.00	63
2,3,4,7,8-PeCDF	0.079 U	—	0.079	2,3,4,6,7,8-HxCDF-13C	2.00	71
Total PeCDF	0.069 U	—	0.069	1,2,3,7,8,9-HxCDF-13C	2.00	72
1,2,3,7,8-PeCDD	0.13 U	—	0.13	1,2,3,6,7,8-HxCDD-13C	2.00	70
Total PeCDD	0.61	—	0.13 J	1,2,3,4,6,7,8-HpCDF-13C	2.00	79
1,2,3,4,7,8-HxCDF	0.15 U	—	0.15	1,2,3,4,6,7,8-HpCDF-13C	2.00	94
1,2,3,6,7,8-HxCDF	0.11 U	—	0.11	OCDD-13C	4.00	85
2,3,4,6,7,8-HxCDF	0.085 U	—	0.085			
1,2,3,7,8,9-HxCDF	0.066 U	—	0.066	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	0.67	—	0.10 J	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	0.13 U	—	0.13	2,3,7,8-TCDD-37Cl4	0.20	86
1,2,3,6,7,8-HxCDD	0.15 U	—	0.15			
1,2,3,7,8,9-HxCDD	—	0.15	0.14 IJ			
Total HxCDD	0.42	—	0.14 J			
1,2,3,4,6,7,8-HpCDF	0.74	—	0.18 J	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	0.33 U	—	0.33	Equivalence: 0.094 ng/Kg		
Total HpCDF	0.74	—	0.26 J	(Lower-bound - Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	3.5	—	0.17 J			
Total HpCDD	7.9	—	0.17			
OCDF	—	0.95	0.18 IJ			
OCDD	35	—	0.33			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).

ND = Not Detected

EMPC = Estimated Maximum Possible Concentration

NA = Not Applicable

EDL = Estimated Detection Limit

NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.

J = Estimated value

B = Less than 10x higher than method blank level

I = Interference present

## REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC  
1700 Elm Street - Suite 200  
Minneapolis, MN 55414

Tel: 612-607-1700  
Fax: 612-607-6444

## Method 8290 Sample Analysis Results

Client - PASI Florida

Client's Sample ID	AD13813_323462					
Lab Sample ID	35475254002					
Filename	F190629A_06					
Injected By	JRH					
Total Amount Extracted	12.1 g			Matrix	Solid	
% Moisture	18.6			Dilution	NA	
Dry Weight Extracted	9.82 g			Collected	06/12/2019 11:06	
ICAL ID	F190620			Received	06/15/2019 09:30	
CCal Filename(s)	F190628B_17 & F190629A_17			Extracted	06/25/2019 15:10	
Method Blank ID	BLANK-71439			Analyzed	06/29/2019 03:52	

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.095 U	—	0.095	2,3,7,8-TCDF-13C	2.00	80
Total TCDF	0.095 U	—	0.095	2,3,7,8-TCDD-13C	2.00	81
2,3,7,8-TCDD	0.088 U	—	0.088	1,2,3,7,8-PeCDF-13C	2.00	75
Total TCDD	0.27	—	0.088 J	2,3,4,7,8-PeCDF-13C	2.00	76
2,3,4,7,8-PeCDF	0.27	—	0.088 J	1,2,3,7,8-PeCDD-13C	2.00	89
1,2,3,7,8-PeCDF	0.072 U	—	0.072	1,2,3,6,7,8-HxCDF-13C	2.00	68
2,3,4,7,8-PeCDF	0.069 U	—	0.069	1,2,3,6,7,8-HxCDF-13C	2.00	72
Total PeCDF	0.45	—	0.071 J	2,3,4,6,7,8-HxCDF-13C	2.00	75
1,2,3,7,8-PeCDD	0.19 U	—	0.19	1,2,3,4,7,8-HxCDD-13C	2.00	76
Total PeCDD	0.33	—	0.19 J	1,2,3,4,6,7,8-HpCDF-13C	2.00	77
1,2,3,4,7,8-HxCDF	0.14 U	—	0.14	1,2,3,4,6,7,8-HpCDF-13C	2.00	83
1,2,3,6,7,8-HxCDF	0.11 U	—	0.11	OCDD-13C	2.00	85
2,3,4,6,7,8-HxCDF	0.086 U	—	0.086	1,2,3,4,7,8-HxCDD-13C	2.00	96
1,2,3,7,8,9-HxCDF	0.084 U	—	0.084	1,2,3,7,8,9-HxCDD-13C	2.00	92
Total HxCDF	0.37	—	0.10 J	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	0.13 U	—	0.13	2,3,7,8-TCDD-37Cl4	0.20	NA
1,2,3,6,7,8-HxCDD	0.12 U	—	0.12			
1,2,3,7,8,9-HxCDD	0.14 U	—	0.14			
Total HxCDD	0.89	—	0.13 J			
1,2,3,4,6,7,8-HpCDF	0.50	—	0.23 J	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	0.31 U	—	0.31	Equivalence: 0.058 ng/Kg		
Total HpCDF	0.50	—	0.27 J	(Lower-bound - Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	2.6	—	0.18 J			
Total HpCDD	6.4	—	0.18			
OCDF	0.85	—	0.19 J			
OCDD	26	—	0.31			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).

ND = Not Detected

EMPC = Estimated Maximum Possible Concentration

NA = Not Applicable

EDL = Estimated Detection Limit

NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.

J = Estimated value

## REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC  
1700 Elm Street - Suite 200  
Minneapolis, MN 55414

Tel: 612-607-1700  
Fax: 612-607-6444

## Method 8290 Sample Analysis Results

Client - PASI Florida

Client's Sample ID	AD13811 323448					
Lab Sample ID	35475254003					
Filename	F190629A_07					
Injected By	JRH					
Total Amount Extracted	12.3 g			Matrix	Solid	
% Moisture	18.9			Dilution	NA	
Dry Weight Extracted	9.95 g			Collected	06/12/2019 10:53	
ICAL ID	F190620			Received	06/15/2019 09:30	
CCal Filename(s)	F190628B_17 & F190629A_17			Extracted	06/25/2019 15:10	
Method Blank ID	BLANK-71439			Analyzed	06/29/2019 04:32	

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.043 U	—	0.043	2,3,7,8-TCDF-13C	2.00	74
Total TCDF	0.24	—	0.043 BJ	2,3,7,8-TCDD-13C	2.00	75
1,2,3,7,8-PeCDF	0.071 U	—	0.071	1,2,3,7,8-PeCDF-13C	2.00	66
Total TCDD	0.34	—	0.071 J	2,3,4,7,8-PeCDF-13C	2.00	77
1,2,3,7,8-PeCDF	0.051 U	—	0.051	1,2,3,7,8-PeCDD-13C	2.00	60
2,3,4,7,8-PeCDF	0.051	—	0.043 J	1,2,3,4,7,8-HxCDF-13C	2.00	64
Total PeCDF	0.67	—	0.047 J	2,3,4,6,7,8-HxCDF-13C	2.00	65
1,2,3,7,8-PeCDD	0.092 U	—	0.092	1,2,3,4,7,8-HxCDD-13C	2.00	67
Total PeCDD	0.33	—	0.092 J	1,2,3,4,6,7,8-HpCDF-13C	2.00	74
1,2,3,4,7,8-HxCDF	0.10 U	—	0.10	1,2,3,4,6,7,8-HpCDD-13C	2.00	88
1,2,3,6,7,8-HxCDF	0.096 U	—	0.096	OCDD-13C	4.00	84
2,3,4,6,7,8-HxCDF	0.077 U	—	0.077			
1,2,3,7,8,9-HxCDF	0.068 U	—	0.068	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	0.76	—	0.086 J	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	0.13 U	—	0.13	2,3,7,8-TCDD-37Cl4	0.20	90
1,2,3,6,7,8-HxCDD	0.15	—	0.13 J			
1,2,3,7,8,9-HxCDD	0.14 U	—	0.14			
Total HxCDD	1.9	—	0.13 J			
1,2,3,4,6,7,8-HpCDF	0.48	—	0.30 J	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	0.21 U	—	0.21	Equivalence: 0.17 ng/Kg		
Total HpCDF	0.48	—	0.26 J	(Lower-bound - Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	7.1	—	0.19			
Total HpCDD	16	—	0.19			
OCDF	1.0	—	0.19 J			
OCDD	52	—	0.24			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).

ND = Not Detected

EMPC = Estimated Maximum Possible Concentration

NA = Not Applicable

EDL = Estimated Detection Limit

NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.

J = Estimated value

B = Less than 10x higher than method blank level

## REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC  
1700 Elm Street - Suite 200  
Minneapolis, MN 55414

Tel: 612-607-1700  
Fax: 612-607-6444

## Method 8290 Sample Analysis Results

Client - PASI Florida

Client's Sample ID	AD13809_323460				
Lab Sample ID	35475254004				
Filename	F190629A_08				
Injected By	JRH				
Total Amount Extracted	13.6 g			Matrix	Solid
% Moisture	16.2			Dilution	NA
Dry Weight Extracted	11.4 g			Collected	06/12/2019 10:43
ICAL ID	F190620			Received	06/15/2019 09:30
CCal Filename(s)	F190628B_17 & F190629A_17			Extracted	06/25/2019 15:10
Method Blank ID	BLANK-71439			Analyzed	06/29/2019 05:11

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.40	—	0.041 J	2,3,7,8-TCDF-13C	2.00	75
Total TCDF	4.4	—	0.041	2,3,7,8-TCDD-13C	2.00	74
1,2,3,7,8-PeCDF	0.19	—	0.035 J	1,2,3,7,8-PeCDF-13C	2.00	68
Total TCDD	11	—	0.035	2,3,4,7,8-PeCDF-13C	2.00	67
1,2,3,7,8-PeCDF	0.24	—	0.11 J	1,2,3,6,7,8-HxCDF-13C	2.00	61
2,3,4,7,8-PeCDF	0.47	—	0.11 J	2,3,4,6,7,8-HxCDF-13C	2.00	65
Total PeCDF	6.6	—	0.11	1,2,3,7,8,9-HxCDF-13C	2.00	67
1,2,3,7,8-PeCDD	0.62	—	0.099 J	1,2,3,4,7,8-HxCDD-13C	2.00	64
Total PeCDD	9.4	—	0.099	1,2,3,4,6,7,8-HpCDF-13C	2.00	75
1,2,3,4,7,8-HxCDF	0.52	—	0.19 J	1,2,3,4,6,7,8-HpCDF-13C	2.00	90
1,2,3,6,7,8-HxCDF	0.51	—	0.091 J	OCDD-13C	4.00	96
2,3,4,6,7,8-HxCDF	0.37	—	0.089 J			
1,2,3,7,8,9-HxCDF	0.20	—	0.068 J	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	9.8	—	0.11	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	0.55	—	0.27 J	2,3,7,8-TCDD-37Cl4	0.20	85
1,2,3,6,7,8-HxCDD	3.0	—	0.18 J			
1,2,3,7,8,9-HxCDD	1.7	—	0.23 J			
Total HxCDD	38	—	0.23			
1,2,3,4,6,7,8-HpCDF	6.6	—	0.14	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	—	0.41	0.32 IJ	Equivalence: 3.6 ng/Kg		
Total HpCDF	22	—	0.23	(Lower-bound - Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	110	—	0.36			
Total HpCDD	240	—	0.36			
OCDF	11	—	0.11			
OCDD	1000	—	0.89			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).

ND = Not Detected

EMPC = Estimated Maximum Possible Concentration

NA = Not Applicable

EDL = Estimated Detection Limit

NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.

J = Estimated value

I = Interference present

## REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC  
1700 Elm Street - Suite 200  
Minneapolis, MN 55414

Tel: 612-607-1700  
Fax: 612-607-6444

## Method 8290 Sample Analysis Results

Client - PASI Florida

Client's Sample ID	AD13807 323454				
Lab Sample ID	35475254005				
Filename	F190629A_09				
Injected By	JRH				
Total Amount Extracted	13.2 g		Matrix	Solid	
% Moisture	16.3		Dilution	NA	
Dry Weight Extracted	11.0 g		Collected	06/12/2019 10:30	
ICAL ID	F190620		Received	06/15/2019 09:30	
CCal Filename(s)	F190628B_17 & F190629A_17		Extracted	06/25/2019 15:10	
Method Blank ID	BLANK-71439		Analyzed	06/29/2019 05:51	

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.23	—	0.037 J	2,3,7,8-TCDF-13C	2.00	77
Total TCDF	3.5	—	0.037	2,3,7,8-TCDD-13C	2.00	79
2,3,7,8-TCDD	0.038 U	—	0.038	1,2,3,7,8-PeCDF-13C	2.00	70
Total TCDD	10	—	0.038	2,3,4,7,8-PeCDF-13C	2.00	82
1,2,3,7,8-PeCDF	—	0.16	0.040 IJ	1,2,3,4,7,8-HxCDF-13C	2.00	64
2,3,4,7,8-PeCDF	0.35	—	0.040 J	2,3,4,6,7,8-HxCDF-13C	2.00	70
Total PeCDF	5.6	—	0.040	1,2,3,7,8-HxCDF-13C	2.00	74
1,2,3,7,8-PeCDD	0.39	—	0.11 J	1,2,3,6,7,8-HxCDD-13C	2.00	69
Total PeCDD	4.5	—	0.11 J	1,2,3,4,6,7,8-HpCDF-13C	2.00	79
1,2,3,4,7,8-HxCDF	0.29	—	0.15 J	1,2,3,4,6,7,8-HpCDF-13C	2.00	100
1,2,3,6,7,8-HxCDF	—	0.35	0.14 IJ	OCDD-13C	4.00	97
2,3,4,6,7,8-HxCDF	0.48	—	0.070 J			
1,2,3,7,8,9-HxCDF	0.082 U	—	0.082	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	8.4	—	0.11	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	—	0.30	0.13 IJ	2,3,7,8-TCDD-37Cl4	0.20	84
1,2,3,6,7,8-HxCDD	1.8	—	0.17 J			
1,2,3,7,8,9-HxCDD	1.3	—	0.11 J			
Total HxCDD	15	—	0.13			
1,2,3,4,6,7,8-HpCDF	11	—	0.24	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	0.50 U	—	0.50	Equivalence: 2.0 ng/Kg		
Total HpCDF	23	—	0.37	(Lower-bound - Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	55	—	0.34			
Total HpCDD	100	—	0.34			
OCDF	14	—	0.11			
OCDD	420	—	0.81			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).

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NC = Not Calculated

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I= Interference present

## REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC  
1700 Elm Street - Suite 200  
Minneapolis, MN 55414

Tel: 612-607-1700  
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## Method 8290 Sample Analysis Results

Client - PASI Florida

Client's Sample ID	AD13805_323452					
Lab Sample ID	35475254006					
Filename	F190629A_10					
Injected By	JRH					
Total Amount Extracted	13.4 g			Matrix	Solid	
% Moisture	27.3			Dilution	NA	
Dry Weight Extracted	9.71 g			Collected	06/12/2019 10:17	
ICAL ID	F190620			Received	06/15/2019 09:30	
CCal Filename(s)	F190628B_17 & F190629A_17			Extracted	06/25/2019 15:10	
Method Blank ID	BLANK-71439			Analyzed	06/29/2019 06:30	

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	—	0.13	0.069 IJ	2,3,7,8-TCDF-13C	2.00	66
Total TCDF	0.069 U	—	0.069	2,3,7,8-TCDD-13C	2.00	68
2,3,7,8-TCPDD	0.13 U	—	0.13	1,2,3,7,8-PeCDF-13C	2.00	57
Total TCDD	0.27	—	0.13 J	2,3,4,7,8-PeCDF-13C	2.00	58
1,2,3,7,8-PeCDF	0.13 U	—	0.13	1,2,3,7,8-PeCDF-13C	2.00	55
2,3,4,7,8-PeCDF	0.15 U	—	0.15	1,2,3,7,8-PeCDF-13C	2.00	61
Total PeCDF	0.48	—	0.14 J	1,2,3,7,8-HxCDF-13C	2.00	64
1,2,3,7,8-PeCDD	0.27 U	—	0.27	1,2,3,6,7,8-HxCDD-13C	2.00	60
Total PeCDD	0.75	—	0.27 J	1,2,3,4,6,7,8-HxCDD-13C	2.00	76
1,2,3,4,7,8-HxCDF	0.23 U	—	0.23	1,2,3,4,6,7,8-HxCDF-13C	2.00	94
1,2,3,6,7,8-HxCDF	0.20 U	—	0.20	OCDD-13C	4.00	92
2,3,4,6,7,8-HxCDF	0.12 U	—	0.12			
1,2,3,7,8,9-HxCDF	0.13 U	—	0.13	1,2,3,4,7,8-HxCDF-13C	2.00	NA
Total HxCDF	0.17 U	—	0.17	1,2,3,7,8,9-HxCDF-13C	2.00	NA
1,2,3,4,7,8-HxCDD	0.22 U	—	0.22	2,3,7,8-TCDD-37Cl4	0.20	72
1,2,3,6,7,8-HxCDD	0.25 U	—	0.25			
1,2,3,7,8,9-HxCDD	0.22 U	—	0.22			
Total HxCDD	2.3	—	0.23 J			
1,2,3,4,6,7,8-HpCDF	—	1.5	0.59 IJ	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	0.99 U	—	0.99	Equivalence: 0.16 ng/Kg		
Total HpCDF	0.79 U	—	0.79	(Lower-bound - Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	7.4	—	0.44			
Total HpCDD	18	—	0.44			
OCDF	3.0	—	0.25 J			
OCDD	59	—	0.36			

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NC = Not Calculated

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## Method 8290 Sample Analysis Results

Client - PASI Florida

Client's Sample ID	AD13803 323446					
Lab Sample ID	35475254007					
Filename	F190629A_11					
Injected By	JRH					
Total Amount Extracted	13.6 g			Matrix	Solid	
% Moisture	13.0			Dilution	NA	
Dry Weight Extracted	11.8 g			Collected	06/12/2019 10:05	
ICAL ID	F190620			Received	06/15/2019 09:30	
CCal Filename(s)	F190628B_17 & F190629A_17			Extracted	06/25/2019 15:10	
Method Blank ID	BLANK-71439			Analyzed	06/29/2019 07:10	

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.035 U	—	0.035	2,3,7,8-TCDF-13C	2.00	77
Total TCDF	0.34	—	0.035 BJ	2,3,7,8-TCDD-13C	2.00	77
2,3,7,8-TCPDD	0.037 U	—	0.037	1,2,3,7,8-PeCDF-13C	2.00	69
Total TCDD	0.51	—	0.037 J	2,3,4,7,8-PeCDF-13C	2.00	70
1,2,3,7,8-PeCDF	0.050 U	—	0.050	1,2,3,7,8-HxCDF-13C	2.00	62
2,3,4,7,8-PeCDF	—	0.082	0.064 IU	2,3,4,6,7,8-HxCDF-13C	2.00	69
Total PeCDF	0.73	—	0.057 J	1,2,3,7,8-HxCDF-13C	2.00	71
1,2,3,7,8-PeCDD	0.13 U	—	0.13	1,2,3,6,7,8-HxCDD-13C	2.00	69
Total PeCDD	0.67	—	0.13 J	1,2,3,4,6,7,8-HpCDF-13C	2.00	83
1,2,3,4,7,8-HxCDF	0.12	—	0.089 J	1,2,3,4,6,7,8-HpCDF-13C	2.00	100
1,2,3,6,7,8-HxCDF	0.087	—	0.080 J	OCDD-13C	4.00	95
2,3,4,6,7,8-HxCDF	0.078	—	0.055 J			
1,2,3,7,8,9-HxCDF	0.056 U	—	0.056	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	1.5	—	0.070 J	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	0.072 U	—	0.072	2,3,7,8-TCDD-37Cl4	0.20	88
1,2,3,6,7,8-HxCDD	0.32	—	0.15 J			
1,2,3,7,8,9-HxCDD	0.24	—	0.13 J			
Total HxCDD	4.5	—	0.12			
1,2,3,4,6,7,8-HpCDF	1.2	—	0.28 J	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	0.36 U	—	0.36	Equivalence: 0.35 ng/Kg		
Total HpCDF	1.2	—	0.32 J	(Lower-bound - Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	11	—	0.23			
Total HpCDD	43	—	0.23			
OCDF	2.9	—	0.13 J			
OCDD	110	—	0.24			

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NC = Not Calculated

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J = Estimated value

B = Less than 10x higher than method blank level

I= Interference present

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Minneapolis, MN 55414

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## Method 8290 Sample Analysis Results

Client - PASI Florida

Client's Sample ID	AD13801_323466				
Lab Sample ID	35475254008				
Filename	F190629A_12				
Injected By	JRH				
Total Amount Extracted	13.7 g			Matrix	Solid
% Moisture	24.1			Dilution	NA
Dry Weight Extracted	10.4 g			Collected	06/12/2019 09:53
ICAL ID	F190620			Received	06/15/2019 09:30
CCal Filename(s)	F190628B_17 & F190629A_17			Extracted	06/25/2019 15:10
Method Blank ID	BLANK-71439			Analyzed	06/29/2019 07:50

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	2.1	---	0.067	2,3,7,8-TCDF-13C	2.00	68
Total TCDF	40	—	0.067	2,3,7,8-TCDD-13C	2.00	67
				1,2,3,7,8-PeCDF-13C	2.00	60
2,3,7,8-TCD	1.3	—	0.062	2,3,4,7,8-PeCDF-13C	2.00	60
Total TCD	98	—	0.062	1,2,3,7,8-PeCDD-13C	2.00	70
				1,2,3,4,7,8-HxCDF-13C	2.00	50
1,2,3,7,8-PeCDF	—	1.4	0.099 IJ	1,2,3,6,7,8-HxCDF-13C	2.00	50
2,3,4,7,8-PeCDF	1.8	—	0.079 J	2,3,4,6,7,8-HxCDF-13C	2.00	57
Total PeCDF	24	—	0.089	1,2,3,7,8,9-HxCDF-13C	2.00	60
				1,2,3,4,7,8-HxCDD-13C	2.00	57
1,2,3,7,8-PeCDD	—	2.8	0.17 IJ	1,2,3,6,7,8-HxCDD-13C	2.00	56
Total PeCDD	28	—	0.17	1,2,3,4,6,7,8-HpCDF-13C	2.00	64
				1,2,3,4,7,8,9-HpCDF-13C	2.00	79
1,2,3,4,7,8-HxCDF	1.0	—	0.23 J	1,2,3,4,6,7,8-HpCDD-13C	2.00	84
1,2,3,6,7,8-HxCDF	1.3	—	0.16 J	OCDD-13C	4.00	92
2,3,4,6,7,8-HxCDF	—	0.85	0.12 IJ			
1,2,3,7,8,9-HxCDF	0.65	—	0.14 J	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	17	—	0.16	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	2.2	—	0.35 J	2,3,7,8-TCDD-37Cl4	0.20	75
1,2,3,6,7,8-HxCDD	9.7	—	0.23			
1,2,3,7,8,9-HxCDD	7.5	—	0.37			
Total HxCDD	98	—	0.32			
1,2,3,4,6,7,8-HpCDF	—	10	0.67 I	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	0.57 U	—	0.57	Equivalence: 10 ng/Kg		
Total HpCDF	0.62 U	—	0.62	(Lower-bound - Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	240	—	0.67			
Total HpCDD	450	—	0.67			
OCDF	23	—	0.20			
OCDD	1700	—	0.88			

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Minneapolis, MN 55414

Tel: 612-607-1700  
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## Method 8290 Sample Analysis Results

Client - PASI Florida

Client's Sample ID	AD13799 323464					
Lab Sample ID	35475254009					
Filename	F190629A_13					
Injected By	JRH					
Total Amount Extracted	13.1 g			Matrix	Solid	
% Moisture	26.8			Dilution	NA	
Dry Weight Extracted	9.60 g			Collected	06/12/2019 09:38	
ICAL ID	F190620			Received	06/15/2019 09:30	
CCal Filename(s)	F190628B_17 & F190629A_17			Extracted	06/25/2019 15:10	
Method Blank ID	BLANK-71439			Analyzed	06/29/2019 08:29	

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	—	0.16	0.082 IJ	2,3,7,8-TCDF-13C	2.00	63
Total TCDF	2.3	—	0.082	2,3,7,8-TCDD-13C	2.00	62
2,3,7,8-TCPDF	0.078 U	—	0.078	1,2,3,7,8-PeCDF-13C	2.00	60
Total TCDD	1.0	—	0.078 J	2,3,4,7,8-PeCDF-13C	2.00	62
1,2,3,7,8-PeCDF	—	0.14	0.12 IJ	1,2,3,4,7,8-HxCDF-13C	2.00	57
2,3,4,7,8-PeCDF	0.19	—	0.14 J	1,2,3,4,6,7,8-HxCDF-13C	2.00	61
Total PeCDF	2.5	—	0.13 J	1,2,3,7,8,9-HxCDF-13C	2.00	58
1,2,3,7,8-PeCDD	0.15 U	—	0.15	1,2,3,6,7,8-HxCDD-13C	2.00	60
Total PeCDD	0.15 U	—	0.15	1,2,3,4,6,7,8-HpCDF-13C	2.00	66
1,2,3,4,7,8-HxCDF	0.23	—	0.21 J	1,2,3,4,6,7,8-HpCDF-13C	2.00	79
1,2,3,6,7,8-HxCDF	0.21 U	—	0.21	OCDD-13C	4.00	68
2,3,4,6,7,8-HxCDF	0.25	—	0.16 J			
1,2,3,7,8,9-HxCDF	0.27 U	—	0.27	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	2.8	—	0.21 J	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	0.28 U	—	0.28	2,3,7,8-TCDD-37Cl4	0.20	68
1,2,3,6,7,8-HxCDD	0.67	—	0.25 J			
1,2,3,7,8,9-HxCDD	0.32 U	—	0.32			
Total HxCDD	6.1	—	0.29			
1,2,3,4,6,7,8-HpCDF	2.4	—	0.41 J	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	0.83 U	—	0.83	Equivalence: 0.52 ng/Kg		
Total HpCDF	2.4	—	0.62 J	(Lower-bound - Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	14	—	0.34			
Total HpCDD	47	—	0.34			
OCDF	5.7	—	0.38 J			
OCDD	120	—	0.56			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).

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Minneapolis, MN 55414

Tel: 612-607-1700  
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## Method 8290 Sample Analysis Results

Client - PASI Florida

Client's Sample ID	AD13797_323456					
Lab Sample ID	35475254010					
Filename	F190629A_14					
Injected By	JRH					
Total Amount Extracted	13.4 g			Matrix	Solid	
% Moisture	9.1			Dilution	NA	
Dry Weight Extracted	12.2 g			Collected	06/12/2019 11:31	
ICAL ID	F190620			Received	06/15/2019 09:30	
CCal Filename(s)	F190628B_17 & F190629A_17			Extracted	06/25/2019 15:10	
Method Blank ID	BLANK-71439			Analyzed	06/29/2019 09:09	

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	1.0	—	0.045	2,3,7,8-TCDF-13C	2.00	83
Total TCDF	12	—	0.045	2,3,7,8-TCDD-13C	2.00	83
1,2,3,7,8-PeCDF	0.40	—	0.082 J	1,2,3,7,8-PeCDF-13C	2.00	78
Total TCDD	19	—	0.082	2,3,4,7,8-PeCDF-13C	2.00	79
1,2,3,7,8-PeCDF	0.35	—	0.073 J	1,2,3,7,8-PeCDF-13C	2.00	61
2,3,4,7,8-PeCDF	1.3	—	0.060 J	1,2,3,7,8-HxCDF-13C	2.00	68
Total PeCDF	19	—	0.066	1,2,3,7,8-HxCDF-13C	2.00	73
1,2,3,7,8-PeCDD	0.79	—	0.15 J	1,2,3,6,7,8-HxCDD-13C	2.00	70
Total PeCDD	10	—	0.15	1,2,3,4,6,7,8-HxCDD-13C	2.00	78
1,2,3,4,7,8-HxCDF	0.75	—	0.098 J	1,2,3,4,6,7,8-HxCDF-13C	2.00	98
1,2,3,6,7,8-HxCDF	0.67	—	0.081 J	OCDD-13C	4.00	99
2,3,4,6,7,8-HxCDF	0.61	—	0.062 J			
1,2,3,7,8,9-HxCDF	—	0.19	0.075 IJ	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	15	—	0.079	1,2,3,7,8,9-HxCDF-13C	2.00	NA
1,2,3,4,7,8-HxCDD	—	0.82	0.19 IJ	2,3,7,8-TCDD-37Cl4	0.20	91
1,2,3,6,7,8-HxCDD	3.6	—	0.15 J			
1,2,3,7,8,9-HxCDD	2.6	—	0.21 J			
Total HxCDD	41	—	0.18			
1,2,3,4,6,7,8-HpCDF	11	—	0.20	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	—	0.61	0.25 IJ	Equivalence: 5.0 ng/Kg		
Total HpCDF	35	—	0.22	(Lower-bound - Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	120	—	0.24			
Total HpCDD	310	—	0.24			
OCDF	25	—	0.20			
OCDD	1100	—	0.61			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).

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Minneapolis, MN 55414

Tel: 612-607-1700  
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## Method 8290 Blank Analysis Results

Lab Sample Name	DFBLKFY	Matrix	Solid/Wipe
Lab Sample ID	BLANK-71439	Dilution	NA
Filename	F190628A_04	Extracted	06/25/2019 15:10
Total Amount Extracted	10.4 g	Analyzed	06/28/2019 03:17
ICAL ID	F190620	Injected By	SMT
CCal Filename(s)	F190627A_06 & F190628A_18		

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.051 U	—	0.051	2,3,7,8-TCDF-13C	2.00	77
Total TCDF	0.073	—	0.051 J	2,3,7,8-TCDD-13C	2.00	75
				1,2,3,7,8-PeCDF-13C	2.00	69
2,3,7,8-TCDD	0.055 U	—	0.055	2,3,4,7,8-PeCDF-13C	2.00	69
Total TCDD	0.055 U	—	0.055	1,2,3,7,8-PeCDD-13C	2.00	76
				1,2,3,4,7,8-HxCDF-13C	2.00	56
1,2,3,7,8-PeCDF	0.075 U	—	0.075	1,2,3,6,7,8-HxCDF-13C	2.00	60
2,3,4,7,8-PeCDF	0.100 U	—	0.100	2,3,4,6,7,8-HxCDF-13C	2.00	63
Total PeCDF	0.088 U	—	0.088	1,2,3,7,8,9-HxCDF-13C	2.00	65
				1,2,3,4,7,8-HxCDD-13C	2.00	62
1,2,3,7,8-PeCDD	0.18 U	—	0.18	1,2,3,6,7,8-HxCDD-13C	2.00	60
Total PeCDD	0.18 U	—	0.18	1,2,3,4,6,7,8-HpCDF-13C	2.00	70
				1,2,3,4,7,8,9-HpCDF-13C	2.00	68
1,2,3,4,7,8-HxCDF	0.12 U	—	0.12	1,2,3,4,6,7,8-HpCDD-13C	2.00	76
1,2,3,6,7,8-HxCDF	0.12 U	—	0.12	OCDD-13C	4.00	67
2,3,4,6,7,8-HxCDF	0.096 U	—	0.096			
1,2,3,7,8,9-HxCDF	0.051 U	—	0.051	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	0.098 U	—	0.098	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	0.091 U	—	0.091	2,3,7,8-TCDD-37Cl4	0.20	87
1,2,3,6,7,8-HxCDD	0.11 U	—	0.11			
1,2,3,7,8,9-HxCDD	0.14 U	—	0.14			
Total HxCDD	0.11 U	—	0.11			
1,2,3,4,6,7,8-HpCDF	0.12 U	—	0.12	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	0.12 U	—	0.12	Equivalence: 0.0034 ng/Kg		
Total HpCDF	0.12 U	—	0.12	(Lower-bound - Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	—	0.20	0.11 IJ			
Total HpCDD	0.28	—	0.11 J			
OCDF	0.25 U	—	0.25			
OCDD	—	1.4	0.37 IJ			

Conc = Concentration(Totals include 2,3,7,8-substituted isomers).

EMPC = Estimated Maximum Possible Concentration

EDL = Estimated Detection Limit

Results reported on a total weight basis and are valid to no more than 2 significant figures.

J = Estimated value

I = Interference present

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## Method 8290 Laboratory Control Spike Results

Lab Sample ID	LCS-71440	Matrix	Solid/Wipe
Filename	U190628B_18	Dilution	NA
Total Amount Extracted	10.5 g	Extracted	06/25/2019 15:10
ICAL ID	U190625	Analyzed	06/28/2019 23:08
CCal Filename(s)	U190628B_02 & U190628B_19	Injected By	SMT
Method Blank ID	BLANK-71439		

Native Isomers	Qs (ng)	Qm (ng)	% Rec.	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.20	0.20	102	2,3,7,8-TCDF-13C	2.0	97
Total TCDF				2,3,7,8-TCDD-13C	2.0	96
				1,2,3,7,8-PeCDF-13C	2.0	92
2,3,7,8-TCDD	0.20	0.22	112	2,3,4,7,8-PeCDF-13C	2.0	89
Total TCDD				1,2,3,7,8-PeCDD-13C	2.0	99
				1,2,3,4,7,8-HxCDF-13C	2.0	91
1,2,3,7,8-PeCDF	1.0	0.99	99	1,2,3,6,7,8-HxCDF-13C	2.0	93
2,3,4,7,8-PeCDF	1.0	0.99	99	2,3,4,6,7,8-HxCDF-13C	2.0	90
Total PeCDF				1,2,3,7,8,9-HxCDF-13C	2.0	86
				1,2,3,4,7,8-HxCDD-13C	2.0	92
1,2,3,7,8-PeCDD	1.0	0.93	93	1,2,3,6,7,8-HxCDD-13C	2.0	76
Total PeCDD				1,2,3,4,6,7,8-HpCDF-13C	2.0	66
				1,2,3,4,7,8,9-HpCDF-13C	2.0	59
1,2,3,4,7,8-HxCDF	1.0	1.1	105	1,2,3,4,6,7,8-HpCDD-13C	2.0	62
1,2,3,6,7,8-HxCDF	1.0	0.96	96	OCDD-13C	4.0	50
2,3,4,6,7,8-HxCDF	1.0	0.95	95			
1,2,3,7,8,9-HxCDF	1.0	0.97	97	1,2,3,4-TCDD-13C	2.0	NA
Total HxCDF				1,2,3,7,8,9-HxCDD-13C	2.0	NA
1,2,3,4,7,8-HxCDD	1.0	1.0	102	2,3,7,8-TCDD-37Cl4	0.20	111
1,2,3,6,7,8-HxCDD	1.0	1.1	113			
1,2,3,7,8,9-HxCDD	1.0	1.1	107			
Total HxCDD						
1,2,3,4,6,7,8-HpCDF	1.0	1.0	102			
1,2,3,4,7,8,9-HpCDF	1.0	0.95	95			
Total HpCDF						
1,2,3,4,6,7,8-HpCDD	1.0	0.95	95			
Total HpCDD						
OCDF	2.0	2.0	98			
OCDD	2.0	2.1	107			

Qs = Quantity Spiked

Qm = Quantity Measured

Rec. = Recovery (Expressed as Percent)

R = Recovery outside of target range

Y = RF averaging used in calculations

Nn = Value obtained from additional analysis

NA = Not Applicable

\* = See Discussion

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